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Actions in follow-up to the recommendations of the International Conference on Population and Development

Flow of financial resources for assisting in the implementation of the Programme of Action of the International Conference on Population and Development

Report of the Secretary-General

Summary

The present report is submitted in response to a request made at the twenty-eighth session of the Commission on Population and Development for an annual report on the flow of financial resources for assisting in the implementation of the Programme of Action of the International Conference on Population and Development. It complies with General Assembly resolutions 49/128 and 50/124, in which the Assembly called for the preparation of periodic reports on the financial resources allocated for the implementation of the Programme of Action.

The report examines levels of donor and domestic expenditures for population activities in developing countries for 2009 and provides estimates for population expenditures in 2010 and projections for 2011. Donor assistance has been increasing steadily over the past few years, reaching $10.4 billion in 2008. This was the first time that population assistance has surpassed $10 billion. The strong upward trend seen recently has stalled, and funding remains virtually unchanged in 2009. It is expected to increase only slightly to just under $10.5 in 2010 and to $10.8 in 2011. A rough estimate of resources mobilized by developing countries, as a group, yielded a figure of $29.8 billion for 2009. The 2010 and 2011 figures are expected to follow the same pattern, increasing to $31 billion in 2010 and to $34 billion in 2011.

* E/CN.9/2011/1.

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Current funding levels continue to remain below the targets necessary to fully implement the goals of the Programme of Action and achieve the Millennium Development Goals. This is true for all four components of the costed population package — family planning; reproductive health; sexually transmitted diseases (STDs) and HIV/AIDS; and basic research, data and population and development policy analysis. Funding is not expected to increase to levels required to meet current needs in the near future, given the current global financial situation.

I. Introduction

1. The present report has been prepared by the United Nations Population Fund (UNFPA) in response to a request at the twenty-eighth session of the Commission on Population and Development (see E/1995/27, annex I, sect. III) for an annual report on the flow of financial resources for assisting in the implementation of the Programme of Action of the International Conference on Population and Development held in Cairo in 1994.[1] The report is part of the work programme of the Commission on Population and Development and is submitted in accordance with General Assembly resolutions 49/128 and 50/124, in which the Assembly called for the preparation of periodic reports on the financial resources allocated for the implementation of the Programme of Action.

2. The report reviews the flow of funds from donor countries for population assistance in developing countries[2] and provides estimates of governmental and non-governmental expenditures for population activities in developing countries for 2009. It also includes donor and developing country estimates for 2010 and projections for 2011. Data collection activities for both donor and domestic resource flows were undertaken by the Netherlands Interdisciplinary Demographic Institute under a contract with UNFPA. To build regional capacity to monitor resource flows, UNFPA and the Institute work with the Indian Institute of Health Management Research in the collection of data on domestic expenditures. Evaluation and analysis of data were carried out jointly by UNFPA and the Netherlands Interdisciplinary Demographic Institute.

3. A detailed questionnaire was mailed to 129 key actors in the field of population and AIDS, including major multilateral organizations and agencies, large private foundations and other non-governmental organizations (NGOs) that provide substantial amounts of population assistance and donor countries that are members of the Organization for Economic Cooperation and Development (OECD) Development Assistance Committee. To decrease respondent fatigue, coordinate monitoring of resource flows and ensure consistency in reporting, as much information from donor countries as possible is obtained from the Development Assistance Committee database. In the absence of complete data from major donors by the publication deadline, the information contained in the report is based on estimates, taking into account past funding behaviour.

4. Information on domestic resource flows is based on data supplied by Governments and non-governmental organizations in developing countries throughout the world, secondary sources, and estimations and projections.

5. The external and domestic financial resource flows for population activities analysed in the report are based on the "costed population package" as specified in paragraph 13.14 of the Programme of Action. The package comprises family planning services; basic reproductive health services; prevention activities in the

[1] *Report of the International Conference on Population and Development, Cairo, 5-13 September 1994* (United Nations publication, Sales No. E.95.XIII.18), chap. I, resolution 1, annex.

[2] All references to developing countries in the present report also include countries with economies in transition.

areas of sexually transmitted diseases (STDs) and HIV/AIDS;[3] and basic research, data and population and development policy analysis.

II. International assistance to population activities

6. Donor assistance for population activities increased until 2008, when it stood at $10.4 billion. The strong upward trend observed in recent years stalled in 2009 as the effect of the global financial crisis began to set in — the provisional figure for 2009 remains about the same as that for 2008 at $10.39 billion (see table 1). It is expected that funding levels will increase only slightly to $10.46 billion in 2010 and to $10.8 billion in 2011. However, it is possible that given the uncertainty regarding how long the effects of the global financial crisis will last, the final figures for 2010 and 2011 may well be below those estimates.

Table 1
International population assistance, by major donor category, 2008-2011
(Millions of United States dollars)

Donor category	*2008*	*2009 (provisional)*	*2010 (estimated)*	*2011 (projected)*
Bilateral assistance				
Developed countries	9 298	9 329	9 423	9 739
Multilateral assistance				
United Nations system	65	36	64	66
Development bank grants	46	95	45	47
Development bank loans	354	296	296[a]	296[a]
Private assistance				
Foundations/non-governmental organizations	643	630	636	656
Subtotal excluding bank loans	10 050	10 090	9 804	10 258
Total	**10 404**	**10 386**	**10 464**	**10 804**

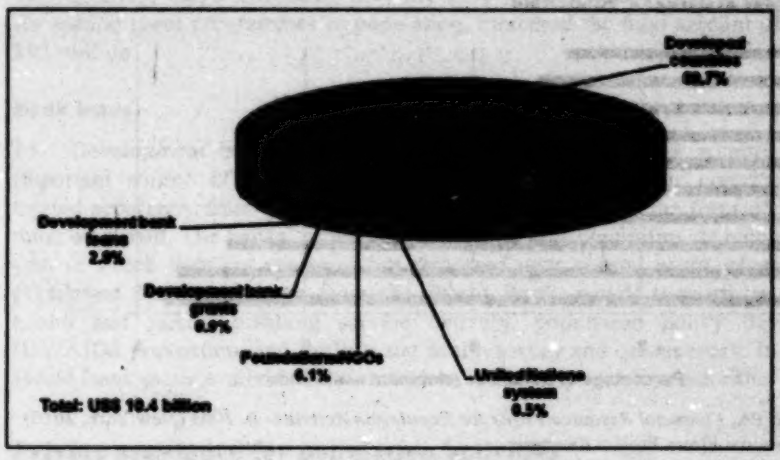
Source: UNFPA, *Financial Resource Flows for Population Activities in 2008* (New York, 2010) and Resource Flows Project database.

Note: Totals may not add up due to rounding.

[a] The 2010-2011 figures for development bank loans are estimated at the 2009 level.

[3] Beginning with the 1999 round of questionnaires, the Resource Flows Project began to include data on *HIV/AIDS treatment and* care to address the growing reporting needs of the Joint United Nations Programme on HIV/AIDS (UNAIDS) and because it was becoming increasingly impossible for respondents to provide information on HIV/AIDS prevention activities only. As of 2008, to ensure consistency, all data on HIV/AIDS expenditures are obtained directly from UNAIDS using the broader AIDS definition.

Figure I
Population assistance by source, 2009



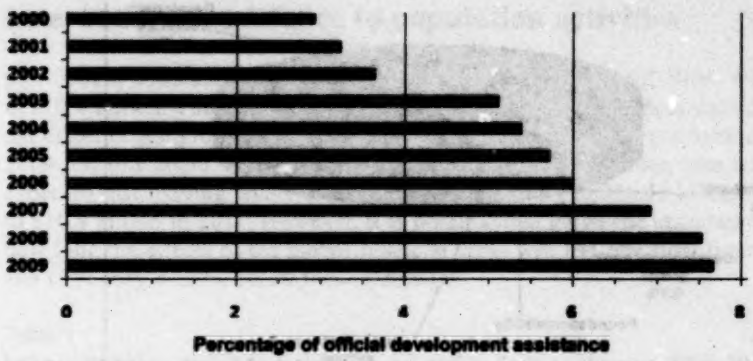
Source: Resource Flows Project database. Figures are provisional.
Note: Totals may not add up due to rounding.

A. Bilateral assistance to population activities

7. Donor countries traditionally provide the largest share of population assistance (see figure I). Bilateral assistance is estimated at just over $9.3 billion in 2009, only slightly above the 2008 figure. The increasing trend seen over the last decade stalled, as a number of countries facing financial difficulties decreased funding for population activities. It is estimated that the situation may have improved somewhat in 2010, and that funding could reach $9.4 billion. Projections for 2011 place this figure at $9.7 billion, reflecting a more optimistic financial outlook for the year.

8. According to the latest OECD figures, official development assistance (ODA) decreased to $120 billion in 2009 from $122.4 billion in 2008. The percentage of total ODA that donor countries, as a group, contributed to population assistance increased to 7.67 per cent in 2009 from 7.54 per cent in 2008 (see figure II). There are significant variations between countries in the percentage of ODA spent on population activities, from 0.73 per cent to 17.93 per cent.

Figure II
Population assistance provided by donor countries as a percentage of official development assistance, 2000-2009



Source: UNFPA, *Financial Resource Flows for Population Activities in 2008* (New York, 2010) and Resource Flows Project database.
Note: Data for 2009 are provisional.

B. Multilateral assistance for population activities

9. Multilateral assistance for population activities consists of contributions provided by the organizations and agencies of the United Nations system and grants and loans provided by development banks.

United Nations system

10. Multilateral assistance originating in the United Nations system, consists mainly of funds from the Joint United Nations Programme on HIV/AIDS, UNFPA, the United Nations Children's Fund and the World Health Organization. Whatever the United Nations agencies receive for population assistance from Development Assistance Committee donor countries is considered to be bilateral assistance. General funds of agencies that are not earmarked for population activities, interest earned on funds and money from income-generating activities that is spent on population activities are considered to be multilateral assistance for population. Funds received from developing countries that agencies spend on population activities are a small portion of an agency's regular budget and are also included as multilateral assistance. Provisional figures for multilateral assistance originating with the United Nations system show a substantial decrease, from $65 million in 2008 to $36 million in 2009. This could be due in part to the economic slowdown as well as to the fact that a number of United Nations agencies did not provide information by the publication deadline.

11. UNFPA is the leading provider of United Nations assistance in the field of population, providing support to 155 developing countries in 2009. UNFPA relies on voluntary contributions and follows its strategic plan for 2008-2013, the goal of which is to accelerate progress towards realizing the Programme of Action and the Millennium Development Goals, focusing on three key areas: population and development, reproductive health and rights, and gender equality. The plan is results-based and specifies anticipated outcomes and indicators to measure results.

Bank grants

12. In 2009, the World Bank, the only development bank reporting expenditures for special grant programmes in population, increased the total amount of grants to $95 million.

Bank loans

13. Development banks, which provide loans to developing countries, are an important source of multilateral population assistance. Their contributions are treated separately from grants because their assistance is in the form of loans that must be repaid. The banks' projects reflect multi-year commitments recorded in the year in which they are approved but disbursed over several years. Most loans for population assistance come from the World Bank, which supports reproductive health and family planning service delivery, population policy development, HIV/AIDS prevention, and fertility and health survey and census work. In 2009, the World Bank made available $296 million in loans for population activities.

C. Private assistance for population activities

14. Foundations, non-governmental organizations and other private organizations are also important sources of population assistance. In 2009, it is estimated that foundations and NGOs contributed $630 million to population activities, down from $643 million in 2008. The recent upward trend has been reversed most probably due to the financial crisis that has hit the institutions. It is not certain whether the level of private assistance for population activities will increase in 2010 and 2011.

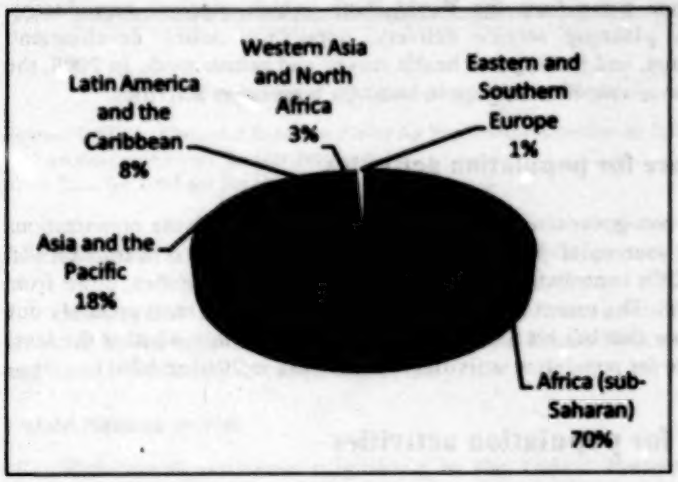
III. Expenditures for population activities

15. Figures for international population assistance reflect financial resources contributed by donors in a given year, while expenditure figures reflect the funds that have been received by developing countries in the year. International assistance may be provided by a donor either directly to the developing country or to an intermediate donor such as a multilateral organization or international NGO. Recipients may be developing country Governments, national NGOs or donor field offices in developing countries. International population assistance for a given year does not automatically equal the expenditures in that year as funds are not always spent in the year in which they are received. This is particularly the case when funds are channelled through an intermediate donor. Thus, for example, funds provided by a donor to a recipient country in year A are included in international population assistance and expenditures in year A. Funds provided by a donor to an intermediate donor in year A but spent by that intermediate donor in a recipient country in year B would be included under population assistance in year A and expenditures in year B. Development bank loans are not included in the expenditure figures because they reflect large blocks of loan agreements made in a single year but intended to be expended over several years.

A. Expenditures for population activities by geographic region

16. Sub-Saharan Africa, which includes the majority of the least developed countries, continues to be the largest recipient of assistance, receiving 70 per cent of all aid going to the five geographic regions (see figure III). About 36 per cent of all population assistance goes to fund global and interregional population activities, including advocacy; research; reproductive health; support for the Global Fund to Fight AIDS, Tuberculosis and Malaria; HIV/AIDS prevention, care and support; and safe motherhood.

Figure III
Population assistance by geographic region, 2009


Western Asia and North Africa 3%
Eastern and Southern Europe 1%
Latin America and the Caribbean 8%
Asia and the Pacific 18%
Africa (sub-Saharan) 70%

Source: Resource Flows Project database. Figures are provisional.

B. Expenditures for population activities by category of activity

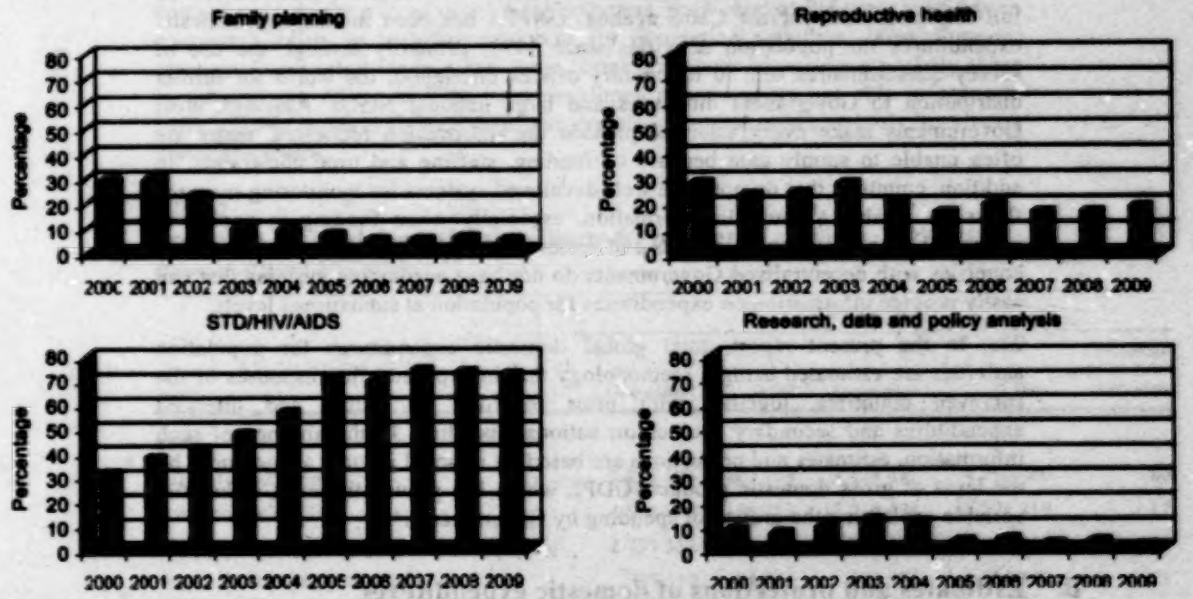
17. UNFPA monitors expenditures for population activities in the following four costed categories: (a) family planning services; (b) basic reproductive health services; (c) STD/HIV/AIDS activities; and (d) basic research, data and population and development policy analysis.

18. The growing trend towards integration of services and the use of sector-wide approaches in development assistance is making it increasingly difficult for countries to readily distinguish between expenditures for population and other health-related activities and, within the population sector, between family planning, reproductive health and STD/HIV/AIDS activities. However, while precise figures may not always be available, it is still possible to estimate the amount of resources spent on each of the four categories of the costed population package. Monitoring expenditures for the separate categories is an important component of budgeting, policymaking and programme planning.

19. Although funding has increased over the years, it has not done so in all areas of the costed population package (see figure IV). In fact, the increase in resource mobilization is due in large part to increases in funding for HIV/AIDS. It is important to ensure a substantial amount of money to stop the spread of HIV/AIDS, but it is also critically important to mobilize adequate resources for the other components of the population package, especially for family planning and reproductive health, which are essential to achieving Millennium Development Goal 5, the one which is falling behind the most.

20. Funding for family planning services has decreased in absolute dollar terms since 1995, when UNFPA first began monitoring resource flows by the four costed population categories. Although funding for reproductive health and basic research activities has increased, HIV/AIDS activities continue to receive by far the most population assistance. Funding for family planning reached its lowest point in 2006, after which it began to increase. Provisional 2009 figures point to a slight decrease. Funding for reproductive health increased noticeably in both 2008 and 2009, while provisional figures for HIV/AIDS point to a decrease for the first time in 2009. Figure IV provides expenditures for population activities as a percentage of total population assistance for the four components of the costed population package for the years 2000 to 2009.

Figure IV
Expenditures for population activities as a percentage of total population assistance, 2000-2009



Source: UNFPA, *Financial Resource Flows for Population Activities in 2008* (New York, 2010) and Resource Flows Project database.

C. Expenditures for population activities by channel of distribution

21. Assistance for population activities flows through a diverse network, moving from the donor to the recipient country through one of the following channels: (a) bilateral — directly from the donor to the recipient country Government; (b) multilateral — through United Nations organizations and agencies; and (c) non-governmental. The bilateral channel has overtaken the NGO channel, which had predominated during the past decade. In 2009, it is estimated that about 36 per cent of population assistance was channelled by NGOs, compared to 39 per cent that went through the bilateral channel and 24 per cent that came from multilateral sources. This trend is expected to continue in 2010 and 2011, largely as a result of bilateral AIDS programmes.

IV. Domestic expenditures for population activities

A. Methodology

22. The Programme of Action pointed out that domestic resources of developing countries provide the largest portion of funds for attaining population and development objectives. It estimated that two thirds of the funding required to finance population programmes would come from domestic resources. The mobilization of adequate domestic financial resources is therefore essential for the full implementation of the Cairo agenda. UNFPA has been monitoring domestic expenditures for population activities since 1997, primarily through the use of survey questionnaires sent to its country offices throughout the world for further distribution to Government ministries and large national NGOs. Although most Governments make every effort to provide the information requested, many are often unable to supply data because of funding, staffing and time constraints. In addition, countries that do not have well-developed systems for monitoring resource flows are unable to provide information, especially when funding is pooled in integrated social and health projects and sector-wide approaches. Furthermore, most countries with decentralized Governments do not have accounting systems that can easily provide information on expenditures for population at subnational levels.

23. In the present report, total global domestic expenditures for population activities are estimated using a methodology that incorporates the responses of the surveyed countries, together with prior reporting on actual and intended expenditures and secondary sources on national spending. In the absence of such information, estimates and projections are based on national income as measured by the level of gross domestic product (GDP), which has proved the most influential variable explaining the growth of spending by Governments.[4]

B. Estimates and projections of domestic expenditures

24. The latest estimates and projections of global domestic expenditures for population activities for 2009-2011 are presented in table 2. The overall levels mobilized increased in 2009 and are projected to increase in 2010 and 2011. This is

[4] See Erik Beekink, "Projections of funds for population and AIDS activities, 2009-2011" (The Hague, 2010).

due in large part to the fact that the figures are heavily influenced by a number of large booming economies which remained mostly unaffected by the global financial crisis. It is estimated that developing countries spent $29.8 billion for population activities in 2009. The largest amount was mobilized in Asia ($17.3 billion), followed by sub-Saharan Africa ($4.8 billion), Latin America and the Caribbean ($4.7 billion), Western Asia and North Africa ($1.7 billion) and Eastern and Southern Europe ($1.3 billion).

25. Domestic expenditures are estimated to have increased, to $31 billion, in 2010 and are projected to increase further to $34 billion in 2011. Asia is expected to continue to mobilize the largest amount of financial resources in both 2010 and 2011. Sub-Saharan Africa is expected to mobilize the second largest amount of funds, followed by Latin America and the Caribbean, Western Asia and North Africa, and Eastern and Southern Europe.

26. It is estimated that 36 per cent of all domestic expenditures for population were spent on STD/HIV/AIDS activities in 2009. This percentage varied considerably by region, from 91 per cent in Eastern and Southern Europe to 11 per cent in Western Asia and North Africa.

27. Data on domestic resource flows are rough estimates because they are often incomplete and not entirely comparable. However, the information is useful in that it provides some idea of the progress made by developing countries in achieving the financial resource targets of the Programme of Action. While the figures show real commitment on the part of developing countries, they conceal the great variation in countries' ability to mobilize resources for population activities. Most domestic resource flows originate in a few large countries. Many countries, especially those in sub-Saharan Africa and the least developed countries, are not able to generate sufficient resources to finance their own population programmes and rely heavily on donor assistance.

Table 2
Projection of global domestic expenditures for population activities, 2009-2011
(Thousands of United States dollars)

	Source of funds				
Year	*Government*	*NGO*	*Consumers*[a]	*Total*	*Percentage spent on STD/ HIV/AIDS*
2009					
Africa (sub-Saharan)	2 226 197	129 558	2 424 891	4 780 646	86
Asia and the Pacific	4 915 659	169 762	12 210 498	17 295 919	17
Latin America and the Caribbean	2 759 332	96 443	1 828 458	4 684 234	48
Western Asia and North Africa	995 310	54 565	641 975	1 691 850	11
Eastern and Southern Europe	876 958	14 749	451 633	1 343 340	91
Total	11 773 456	465 077	17 557 455	29 795 988	36
2010					
Africa (sub-Saharan)	2 234 923	135 276	2 433 908	4 804 106	86
Asia and the Pacific	5 244 541	175 262	13 027 439	18 447 242	16

Year	Source of funds				
	Government	NGO	Consumers[a]	Total	Percentage spent on STD/HIV/AIDS
Latin America and the Caribbean	2 747 062	100 047	1 829 677	4 676 785	47
Western Asia and North Africa	1 035 562	58 041	667 938	1 761 541	12
Eastern and Southern Europe	875 660	15 216	450 965	1 341 841	91
Total	**12 137 748**	**483 842**	**18 409 926**	**31 031 515**	**35**
2011					
Africa (sub-Saharan)	2 240 998	139 461	2 440 185	4 820 644	86
Asia and the Pacific	6 050 954	179 916	15 030 569	21 261 440	15
Latin America and the Caribbean	2 763 093	102 282	1 841 750	4 707 124	47
Western Asia and North Africa	1 061 814	60 332	684 870	1 807 016	12
Eastern and Southern Europe	887 939	15 735	457 289	1 360 963	90
Total	**13 004 797**	**497 727**	**20 454 663**	**33 957 187**	**32**

Source: Resource Flows Project database. See also Erik Beekink, "Projections of funds for population and AIDS activities, 2009-2011" (The Hague, 2010).

[a] Consumer spending on population activities covers only out-of-pocket expenditures and is based on the average amount spent per region, as measured by the World Health Organization for health care in general. For each region, the ratio of private out-of-pocket versus per capita Government expenditures was used to derive consumer expenditures in the case of population activities.

C. Components of domestic funding for population activities

28. Domestic funding for population activities comes primarily from Governments, national NGOs and private consumers. Governments are considered to be responsible for most domestic expenditures for population activities. However, since the level of Government funding usually depends on the level of national income, Governments in least developed countries, which are faced with many competing development priorities, often cannot afford to make the necessary investments in population programmes. They rely heavily on external funding from donors. National NGOs also contribute financial resources for population activities, but the majority of them are also highly dependent on international resources. Their main role lies in advocacy work and in reaching people at the grass-roots level.

29. Consumer spending as measured by out-of-pocket expenditures represents the largest part of resources spent on population activities. Private consumer expenditures account for a large percentage of total funding for health care. Although the exact amount of worldwide health-care spending for population activities is not known, it stands to reason that a significant proportion of expenditures for family planning, reproductive health and STD/HIV/AIDS services is borne by consumers. The few available sources of information on private spending reveal great variations between regions and countries and, in some cases, changes over time in the share of private spending within countries themselves. In estimating consumer spending, the Resource Flows Project used out-of-pocket health expenditures of households from the national health account figures collected

by the World Health Organization. The out-of-pocket health expenditures were assumed to be completely in line with out-of-pocket expenditures for population goods and services.

V. Funding requirements to achieve the objectives of the Programme of Action

30. To ensure adequate funding for the implementation of the Programme of Action, UNFPA reviewed the original estimates for the four categories of the costed population package and produced revised estimates to meet current needs and costs. These revised estimates, which were presented to the Commission on Population and Development at its forty-second session, in 2009, are much higher than the original targets agreed upon in 1994 because they take into account both current needs and current costs and include such interventions as AIDS treatment and care and reproductive cancer screening and treatment that were not part of the original package.

31. Table 3 sets out the levels of funding required to achieve the objectives of the Programme of Action. In order to fully fund the necessary sexual and reproductive health services, including family planning and HIV/AIDS services, as well as censuses, surveys, civil registration and population research and training, the international community would need to mobilize $49 billion in 2009. The costs are minimum estimates required to implement the goals of the Programme of Action in those areas. There will always be unspecified costs that fall outside the scope of the cost estimates, as well as adjustments for demand generation, stock maintenance and the like.

Table 3
Updated cost estimates for implementation of the Programme of Action by subregion, 2009-2015
(Millions of United States dollars)

	2009	*2010*	*2011*	*2012*	*2013*	*2014*	*2015*
Global	**48 980**	**64 724**	**67 762**	**68 196**	**68 629**	**69 593**	**69 810**
Sexual/reproductive health/family planning	23 454	27 437	30 712	32 006	32 714	33 284	33 030
Family planning direct costs	2 342	2 615	2 906	3 209	3 529	3 866	4 097
Maternal health direct costs	6 114	7 868	9 488	11 376	13 462	15 746	18 002
Programme and system-related costs	14 999	16 954	18 319	17 422	15 723	13 672	10 931
HIV/AIDS	23 975	32 450	33 107	33 951	34 734	35 444	36 189
Basic research/data/policy analysis	1 551	4 837	3 943	2 239	1 181	864	591
Sub-Saharan Africa	**20 063**	**27 075**	**29 473**	**29 869**	**30 292**	**30 022**	**28 980**
Sexual/reproductive health/family planning	8 482	10 612	12 596	12 675	12 764	12 184	10 731
Family planning direct costs	329	414	506	606	713	827	931
Maternal health direct costs	1 429	1 833	2 280	2 771	3 306	3 883	4 411
Programme and system-related costs	6 725	8 366	9 809	9 298	8 746	7 473	5 389

	2009	2010	2011	2012	2013	2014	2015
HIV/AIDS	11 228	15 891	16 227	16 746	17 243	17 638	18 110
Basic research/data/policy analysis	353	571	651	449	285	200	139
Asia and the Pacific	**17 549**	**23 281**	**23 923**	**23 788**	**23 862**	**24 415**	**25 245**
Sexual/reproductive health/family planning	9 055	10 278	11 027	11 753	12 124	12 820	13 533
Family planning direct costs	1 434	1 552	1 675	1 803	1 937	2 077	2 156
Maternal health direct costs	2 799	3 664	4 299	5 110	6 018	7 024	8 054
Programme and system-related costs	4 822	5 062	5 053	4 840	4 169	3 719	3 323
HIV/AIDS	7 853	10 687	10 848	11 048	11 207	11 409	11 525
Basic research/data/policy analysis	641	2 316	2 048	987	530	186	187
Latin America and Caribbean	**6 366**	**7 591**	**7 439**	**7 775**	**7 699**	**7 966**	**8 320**
Sexual/reproductive health/family planning	3 132	3 401	3 627	3 837	3 922	4 119	4 347
Family planning direct costs	310	343	378	414	452	492	518
Maternal health direct costs	958	1 182	1 431	1 706	2 009	2 340	2 680
Programme and system-related costs	1 864	1 876	1 818	1 717	1 461	1 286	1 150
HIV/AIDS	3 072	3 461	3 562	3 630	3 703	3 770	3 867
Basic research/data/policy analysis	162	729	250	309	74	78	106
Western Asia and North Africa	**2 795**	**3 685**	**3 418**	**3 538**	**3 501**	**3 865**	**3 721**
Sexual/reproductive health/family planning	1 852	2 009	2 130	2 232	2 258	2 339	2 415
Family planning direct costs	178	204	231	261	292	325	346
Maternal health direct costs	603	735	873	1 019	1 171	1 328	1 471
Programme and system-related costs	1 071	1 070	1 025	953	796	686	598
HIV/AIDS	798	1 095	1 112	1 131	1 146	1 163	1 183
Basic research/data/policy analysis	145	582	177	174	97	363	123
Eastern and Southern Europe	**2 204**	**3 091**	**3 508**	**3 226**	**3 275**	**3 326**	**3 542**
Sexual/reproductive health/family planning	933	1 137	1 334	1 510	1 645	1 824	2 004
Family planning direct costs	91	103	116	125	135	145	146
Maternal health direct costs	324	454	605	771	960	1 171	1 386
Programme and system-related costs	517	579	613	614	551	508	471
HIV/AIDS	1 023	1 316	1 358	1 397	1 435	1 465	1 503
Basic research/data/policy analysis	248	638	816	320	195	38	35

Source: UNFPA, *Revised cost estimates for the implementation of the Programme of Action of the International Conference on Population and Development: a methodological report* (New York, 2009).

Note: UNAIDS has since updated its cost estimates for HIV/AIDS expenditures to depict a scenario that reaches coverage later than the original figures presented here. The global 2009 figure for HIV/AIDS is $20 billion. This increases incrementally until it reaches $37 billion in 2015, slightly higher than the original figure.

32. The costing estimates for family planning assume that the current unmet need will be satisfied in 2015, although there is likely to be greater demand for family planning as people become more aware of the options. The costing estimates for reproductive health include antenatal care, delivery care, obstetric complications care, newborn interventions, reproductive organ cancer screening and treatment, as well as other maternal care interventions. STD/HIV/AIDS costing includes elements for prevention, treatment, care and support, including elements specifically to address the prevention of violence against women.

33. The cost estimates for the drugs, supplies and personnel needed to achieve the goals of the Programme of Action increase significantly over time owing to increases in the number of people projected to be receiving care as service coverage is scaled up, as well as underlying increases in the population.

34. Health systems and programme costs related to family planning and reproductive health were estimated to reflect the need for a significant investment in the health systems and planning in order to achieve the goal of universal coverage. Without adequate investment in health systems and programmes, it will be impossible to achieve the coverage goals. Elements included in this cost estimate include programme management, supervision, health education, monitoring and evaluation, advocacy, health system infrastructure, information systems, human resources training and commodity supply systems. The cost estimates for the health systems and programmes assume that the bulk of the investment will be made between 2009 and 2013. As a result of this assumption, the cost estimates for the health systems and programmes peak in 2011 and then begin to decline. Cost estimates also include support during humanitarian crisis situations, which are an ongoing challenge to medical systems in many countries.

35. Total costs for sexual and reproductive health, which includes the family planning and maternal health components (including direct costs and programme and systems costs), are estimated to be $23.5 billion in 2009, peak at $33.3 billion in 2014 and decrease slightly to $33 billion in 2015. Total costs for the HIV/AIDS component are estimated to be $24 billion in 2009 and to increase each year thereafter, until they reach $36.2 billion in 2015.[5]

36. The estimates for the basic data, research and population and development policy analysis component were obtained by summing four expenditure categories: censuses, surveys, civil registration, and research and training. Census expenditures were based on per capita census costs by subregion, which varied from $1.50 in East, Central and North Africa to $11.70 in Southern Europe. The total was then allocated to a four-year period: 10 per cent in the year before the census, 60 per cent in the census year, and 15 per cent in each of the two years after the census. Survey costs were estimated at $1.25 or $1.50 per household, depending on the subregion, while the household sample sizes were estimated at 1 per cent, 0.5 per cent, or 0.25 per cent, depending on whether the country had less than 1 million, between 1 million and 25 million or more than 25 million inhabitants. Furthermore, it was assumed that all developing countries should have a survey of this kind once every four years.

[5] UNAIDS has since updated its cost estimates for HIV/AIDS expenditures to depict a scenario that reaches coverage later than the figures presented in table 3. The global 2009 figure for HIV/AIDS is $20 billion. This increases incrementally until it reaches $37 billion in 2015, slightly higher than the original figure.

37. For civil registration costs, it was assumed that the cost of processing each event (births, deaths, marriages, divorces) and entering it into the statistical system was one third of the per capita census costs for each subregion. The expenditures for research and training were computed as 5 per cent of the total average annual costs of the previous three categories over the period from 2005 to 2015. The updated cost estimates for the data and research component are considerably higher than the original estimates agreed upon in Cairo in 1994, primarily because they reflect the real costs of census-taking to a much larger degree than previously. This is especially true in 2010, when total spending will reach $4.84 billion, of which $4.41 billion will be census expenditure. On the whole, census expenditure makes up about three quarters (75.8 per cent) of the total. Surveys comprise 6.9 per cent and civil registration 12.5 per cent. The average annual expenditure over the seven-year period is estimated to be $2.17 billion.

38. It is clear that current funding levels for all four categories of the costed population package are considerably below what is necessary to meet the needs in developing countries. Given the global financial crisis, stagnating funding levels and the uncertainty of future funding, the full implementation of the Cairo agenda may be in jeopardy. If estimates for 2010 hold, and if donors did indeed contribute around $10 billion and developing countries mobilized approximately $31 billion in domestic resources, the total amount is roughly $24 billion short of what was needed in 2010 to finance population programmes in developing countries.

39. Both donor and domestic funding should be increased in all four components of the costed population package to ensure implementation of the goals of the Programme of Action and the achievement of the Millennium Development Goals.

VI. Major challenges in reaching financial targets

40. *Impact of global financial crisis*. The global financial crisis has affected the amount of resources allocated to population activities. Official development assistance declined in 2009, and a number of donors have decreased funding levels for population. The recent upward trend in population assistance has stagnated.

41. *Dependence on a few key players for resource mobilization*. Population assistance originates with a few major donors, and the majority of domestic resources are mobilized in a few large developing countries. Most donor countries do not provide substantial funding for population activities, and most developing countries are not in a position to mobilize sufficient resources to fund much-needed population and AIDS programmes. Poor countries are faced with many competing development priorities and many of them cannot afford to make the necessary investments in population.

42. *Disproportionate share of consumers in expenditures for population*. Although not easy to track, the role played by consumers in spending for family planning, reproductive health and STD/HIV/AIDS is much larger than usually assumed. In many cases, it exceeds Government and NGO expenditures. Although variations exist between regions and countries, if spending on family planning, reproductive health and STD/HIV/AIDS is completely in line with spending on health in general, then it can be assumed that consumers in developing countries pay more than half of the burden of such expenditures. Out-of-pocket spending by consumers, especially

the poor, has important implications for policy initiatives aimed at reducing poverty and income inequality in the developing world.

VII. Conclusion

A. Progress in resource mobilization

43. Although considerable progress has been made, the financial resources currently mobilized are not sufficient to meet today's growing needs. Current funding levels are way below what is necessary to realize the goals of the Programme of Action and achieve the Millennium Development Goals. This is true for all four components of the costed population package. The lack of adequate funding remains a major impediment to the full implementation of the goals.

44. Of particular concern is the decreasing proportion of funding for family planning services, which, if not reversed, may have serious implications for countries' ability to address unmet needs for such services and could undermine efforts to prevent unintended pregnancies and reduce maternal and infant mortality. It is also very important to ensure adequate investment to support the 2010 round of censuses.

B. The way forward

45. Increased efforts to mobilize adequate resources on the part of both donors and developing countries are essential to fully implement the goals of the Programme of Action. This is especially important in times of financial crisis, when funding levels are not increasing enough to meet current needs in developing countries. The Millennium Development Goals, especially the eradication of extreme poverty and hunger, will not be achieved if population and reproductive health issues are not adequately addressed. Implementing the Programme of Action, especially the reproductive health goal, is essential for meeting the Millennium Development Goals that are directly related to health, including child mortality, maternal health and HIV/AIDS prevention, and social and economic outcomes, including gender equality and poverty eradication.

46. To accelerate the implementation of the Cairo agenda and to achieve the Millennium Development Goals, the international community should continue to:

(a) Ensure that population and reproductive health are seen as an integral part of the achievement of the Millennium Development Goals and that they figure prominently in national development programmes and poverty reduction strategies;

(b) Mobilize sufficient resources to fully implement the Programme of Action and ensure that family planning and reproductive health issues receive the attention they deserve at a time when the focus is increasingly on combating HIV/AIDS;

(c) Establish an effective partnership of donor and recipient countries based on mutual trust, accountability and donor coordination in support of country goals;

(d) Increase attention to cost-effectiveness and programme efficiency so that resources reach all segments of the population, especially those that are most in need;

(e) Enhance the role of the private sector in the mobilization of resources for population and development, in monitoring population expenditures and ensuring that financial targets and equity objectives are met.

47. A more efficient and timely monitoring system to report financial flows for population activities is essential. Currently, both donors and developing countries lag behind in reporting expenditures in this area. The most common constraints encountered include respondent fatigue, lack of human and financial resources, and difficulty in disaggregating the population component in integrated social and health projects and sector-wide approaches, as well as in disaggregating the four categories of the costed population package. Different recording practices and decentralized accounting systems also present significant challenges.

48. Given the uncertainty of funding during the current financial crisis, it is essential that all Governments, of both donor and developing countries, recommit themselves to implementing the objectives of the Programme of Action and mobilizing the resources required to meet current needs. It is also important to ensure that adequate resources are allocated to all areas of the costed population package: family planning services; reproductive health services; STD/HIV/AIDS activities; and basic research, data and population and development policy analysis. Without a firm commitment to population, reproductive health and gender issues, it is unlikely that the goals and targets of the International Conference on Population and Development and the Millennium Summit will be met.

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World demographic trends

Report of the Secretary-General

Summary

Prepared in accordance with resolution 1996/2 of the Economic and Social Council, the present report reviews the results of six population-projection scenarios prepared in order to explore the implications of different fertility trends for population growth and population ageing over the next three centuries. The scenarios considered underscore the importance of reaching replacement-level fertility in all countries of the world in order to avoid unsustainable increases or decreases of the population. They thus provide a rationale for addressing current population imbalances and reinforcing policies that foster fertility reductions in countries where fertility is still above replacement level.

* E/CN.9/2011/1.

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I. Introduction

1. The world population is poised to reach 7 billion in 2011. Although the rate of population growth has been declining since the late 1960s, the doubling of the world population between 1950 and the late 1980s has meant that, over the past half century, each additional billion has been added more rapidly than at any other time in history, with the last two in a record 12 years each.

2. The additions to the world population are increasingly being concentrated in the developing regions of the world and particularly in Africa. Consequently, the share of population growth in the developed regions has declined markedly and is expected to decline further as a rising number of developed countries experience population declines. Such trends are producing population imbalances that will increasingly underpin development prospects and condition long-term sustainability.

3. In the 1970s, awareness of the challenges posed by rapid population growth prompted the international community to hold the first intergovernmental conference on population, the 1974 World Population Conference. The Conference galvanized national and international action to provide family planning and enable people to have the number of children they desired. The Conference recommended that Governments pursue a two-pronged strategy to address population growth, including by establishing and strengthening family planning programmes, on the one hand, and improving people's well-being by reducing child mortality and increasing educational attainment, particularly of girls, on the other. Countries that followed those recommendations experienced marked reductions in fertility. In 2005-2010, 40 per cent of all developing countries saw their fertility drop to less than half their 1970-1975 levels, and fertility levels declined in virtually all other countries in the developing world.

4. Yet, because fertility declines generally followed and were accompanied by significant reductions in child mortality, population growth remained substantial. Annual population increments passed from 47 million in 1950-1955 to 75 million in 1975-1979 and peaked at 89 million in 1990-1995. Since then, annual population increments have been declining but are still high by historical standards, averaging 79 million persons per year.

5. The inertia intrinsic in population growth is partly responsible for the maintenance of high population increments. Because women of reproductive age are today nearly three times as numerous as their counterparts were in 1950, they have 40 per cent more births annually than their grandmothers had in the 1950s, even if their fertility is, on average, half what it was then. Because of this "population momentum", even if the fertility of every country were to reach "replacement level" in 2011, that is, a level that would ensure zero population growth eventually, the world population would continue to grow by an average of 66 million persons annually during 2010-2025.

6. Recognition that the increase in world population is unlikely to change much in the near future, coupled with a sense that fertility decline is far advanced in most countries and that the rate of population growth continues to slow down, has led to a generalized view that population trends are no longer an issue of concern in regard to the development or sustainability of life on the planet. Moreover, the success of United Nations official population projections in forecasting global population growth has so far led to the widespread acceptance of the medium scenario as the

definitive word regarding future population trends. As a consequence, the continued reduction of fertility levels in developing countries is taken for granted and insufficient attention is being paid to the possibility that the population of the future may turn out to be significantly higher than the approximately 9 billion projected by the medium scenario for 2050. Given that in 2012 the international community will focus once more on ways to ensure sustainable development, the present report uses different projection scenarios to illustrate the challenges posed by a failure to achieve stabilization of the world population within the twenty-first century.

II. Scenarios of future population change

7. Projections over long periods are useful for assessing the sensitivity of population trends to small changes in the components of population growth. As part of *World Population Prospects: The 2008 Revision*, long-range projections to 2300[1] have been prepared for every country on the basis of different assumptions about future fertility, mortality and migration. Beyond a few decades, the long-term projections can only be considered as scenarios illustrating the consequences of "what if" assumptions about future trends in fertility and mortality.

8. When considering the projection results, one should bear in mind that, if fertility remains at replacement level for long periods, mortality remains constant and international migration is zero, the population eventually stops growing and reaches a "stationary state" where the annual number of deaths equals the number of births and the age distribution of the population stops changing. In the absence of migration, if fertility is maintained above replacement level and mortality remains constant, the rate of population growth eventually becomes positive and the population increases. Conversely, with constant mortality and zero international migration, fertility that stays below replacement level eventually leads to a decreasing population.

9. In all cases, time is of the essence. When fertility declines from above replacement level to replacement level or below, population momentum keeps the population growing for some time until the number of mothers declines sufficiently. Similarly, when the population is already declining and fertility increases from below replacement level to replacement level or above, population momentum will keep the population declining for some time until the number of mothers increases sufficiently.

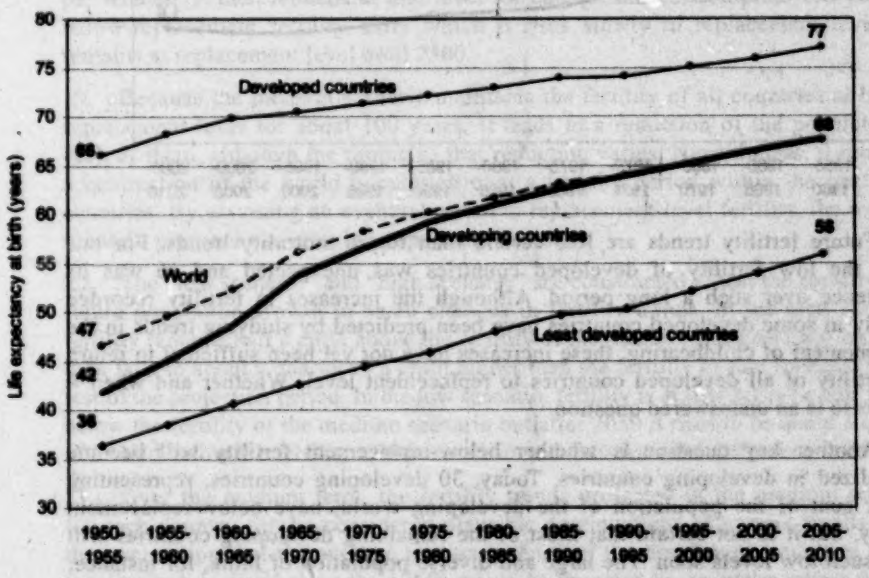
10. Replacement-level fertility is the number of children that women need to bear, on average, to ensure that every woman ever born is replaced by only one daughter. Because women have to survive to childbearing age in order to reproduce, mortality levels have to be taken into account in calculating the average number of children per woman that ensure replacement. Furthermore, because more boys are born than girls, even if mortality were zero, women would have to bear slightly more than two children, on average, to ensure that enough daughters are born. In low-mortality populations, where the probability of surviving to the mean age of childbearing is very close to one, replacement-level fertility is close to 2.1 children per women and may be even slightly lower. In high-mortality populations, replacement-level fertility may be much higher. Thus, in the least developed countries today, replacement level is estimated at 2.5 children per woman.

[1] United Nations, *World Population Prospects: The 2008 Revision, Long-Range Projections Supplement* (CD-ROM version) (POP/DB/WPP/LRPS/Rev.2008).

III. Review of past trends

11. The period 1950-2010 has witnessed unprecedented demographic changes: both mortality and fertility have declined markedly in most countries. As figure I[2] illustrates, life expectancy has increased in all development groups. In developed countries, where life expectancy was already a high 66 years in 1950-1955, it has increased by 11 years to reach 77 years in 2005-2010. In the least developed countries, whose life expectancy is still comparatively low, it rose by 20 years, from 36 to 56 years over the same period, and in the rest of the developing countries, average life expectancy increased even more markedly: by 26 years, from 42 to 68 years. As a result, the gap in life expectancy between developing and developed countries has narrowed considerably. Life expectancy is expected to continue to rise in all groups of countries. The least developed countries, in particular, are expected to strengthen efforts to reduce child mortality, combat the spread of HIV/AIDS and reduce the incidence of other major infectious and parasitic diseases in order to meet the Millennium Development Goals. Improvements in health and longevity are also expected in the other developing countries and in developed countries.

Figure I
Life expectancy at birth by major development group, 1950-2010

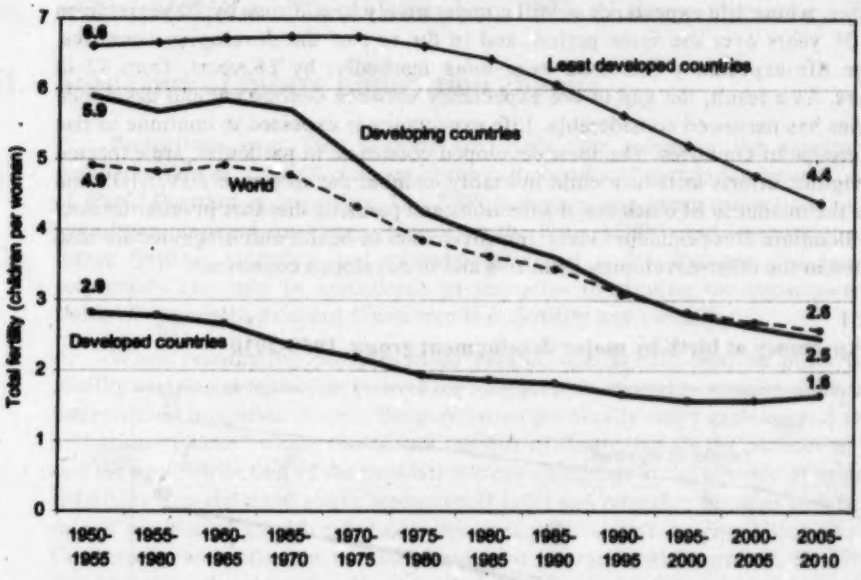


12. With respect to fertility, the changes recorded since 1950 are equally extraordinary. Never before in human history have global fertility levels dropped so much, so fast. Furthermore, they did so mainly as a result of the voluntary decisions by millions of people to limit their family size. Yet, fertility still varies considerably among countries, and there is a marked difference today between the fertility of the least developed countries (4.4 children per woman) and that of the rest of the

[2] Tables and figures in the present document are from *World Population Prospects: The 2008 Revision, Long-Range Projections Supplement.*

developing world (2.5 children per woman). In addition, the average fertility of developed countries, which first dropped below replacement level in 1975-1980, continues to be well below replacement at 1.6 children per woman despite the recent increases recorded by several developed countries (see figure II).

Figure II
Total fertility by major development group, 1950-2010



13. Future fertility trends are less certain than future mortality trends. For one thing, the low fertility of developed countries was unexpected and so was its persistence over such a long period. Although the increases in fertility recorded recently in some developed countries have been predicted by studying trends in the postponement of childbearing, these increases have not yet been sufficient to return the fertility of all developed countries to replacement level. Whether and when it may do so is an unanswered question.

14. Another key question is whether below-replacement fertility will become generalized in developing countries. Today, 30 developing countries, representing 40 per cent of the population of the developing world, have below-replacement fertility, but it is not certain that most of the remaining developing countries will reach such low levels soon. The large and diverse population of India, for instance, may continue to have large segments with high fertility, which could counterbalance the fertility declines in other segments. Furthermore, other populous countries, such as Egypt, Nigeria, the Philippines or Pakistan, still have moderate to high fertility.

15. The least developed countries have been lagging behind in reducing fertility and in many of them the desire for large families is still common. Although the unmet need for family planning to space births and limit family size is high in most of them and their Governments have committed to reducing that unmet need in order to achieve the Millennium Development Goals, there is considerable uncertainty about whether changes in access to family planning and in other important factors, including improving education among girls, will occur fast enough.

IV. Assumptions underlying the six scenarios of future population change

16. Bearing in mind the uncertainties discussed above, six different projection scenarios were prepared, five of which differ only with respect to the path that future fertility is assumed to take. The sixth scenario, named the "no-change scenario", differs from the others with respect to both the path of future fertility and the path of future mortality.

17. The "medium scenario" assumes that future fertility follows a path informed by the past experience of countries at different stages of development. For countries with fertility above 1.85 children per woman, fertility is assumed to decline at a pace derived from the experience of developing countries since the 1970s. Fertility is allowed to decline until it reaches a level of 1.85 children per woman and once that level is reached, it remains at that level for 100 years. After that period, fertility increases slowly until it reaches replacement level and is then maintained at replacement level from that point until 2300.

18. For countries with current fertility below 1.85 children per woman, fertility in the medium scenario is projected to increase, usually slowly, to reach 1.85 children per woman. It then remains at that level for enough time to complete 100 years of below-replacement fertility, after which it rises slowly to replacement level and remains at replacement level until 2300.

19. Because the medium scenario maintains the fertility of all countries at below-replacement level for about 100 years, it leads to a reduction of the population in each of them, although the timing of that reduction varies. Nevertheless, it produces a contraction of the world population over a lengthy period within the next three centuries. By assuming an eventual return to replacement-level fertility, the medium scenario prevents a continuing population decline.

20. The "low scenario" and "high scenario" are constructed to test the sensitivity of future population growth to small changes in fertility trends. In the high scenario, fertility remains half a child above the fertility of the medium scenario until 2050 and then falls to about a quarter of a child higher than the fertility of that scenario for the rest of the projection period. In the low scenario, fertility is at first set to be half a child below the fertility of the medium scenario but after 2050 it rises to be about a quarter of a child below the fertility of that scenario and maintains the difference until 2300.

21. Over the medium term, the fertility trends projected in the medium scenario for each country can be considered plausible continuations of current trends under the assumption that the average past experience of the developing countries whose fertility had declined since the 1960s would be repeated by countries where fertility decline was lagging behind and that the fertility of all developing countries would, like that of developed countries, fall below replacement level and remain below replacement for lengthy periods.

22. In the long run, the medium scenario is based on the neutral assumption that all countries will converge to replacement-level fertility and will therefore tend towards a stabilization of their populations. Nevertheless, no country will achieve a fully stationary stage because mortality keeps on decreasing in the medium scenario; consequently, increasing longevity maintains population growth positive. In the low and high scenarios, future mortality evolves in the same way as in the medium scenario.

23. Given that replacement-level fertility is the key to population stabilization, a projection where fertility is set at its actual replacement level for each country and each five-year period is produced under the "instant-replacement scenario". In that scenario, as in the medium scenario, mortality keeps decreasing until 2300 and, owing to increasing longevity, the population does not quite achieve a stationary state.

24. Two scenarios are produced to assess the sustainability of current levels of the components of population growth. The first is the "constant-fertility scenario", which keeps fertility constant in each country at the level it had in 2005-2010 and lets mortality decline as in the medium scenario. The second is the no-change scenario, which keeps both fertility and mortality constant at the levels they had in 2005-2010. The constant-fertility and no-change scenarios provide useful insights about the implications of current population imbalances for future population change.

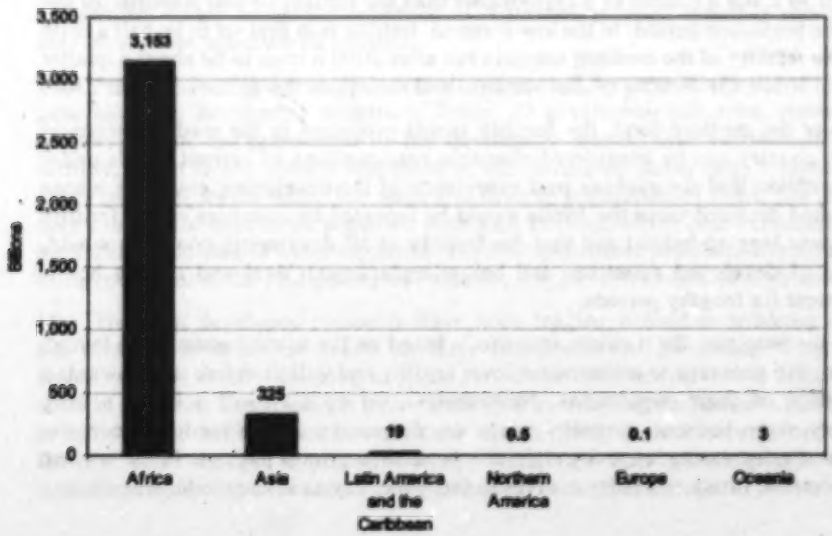
25. In all the scenarios described above, international migration is not zero at the country level over the period 2010-2100 but is set to zero for every country after 2100.

V. Population trends according to different scenarios

A. Unchanging fertility: no-change and constant-fertility scenarios

26. The no-change scenario allows an assessment of the potential sustainability of current population dynamics. Because high-fertility countries tend to have relatively high mortality, this scenario does not yield the highest population growth among the scenarios considered. Nevertheless, it produces a world population of 3.5 trillion people in 2300, with 3.15 trillion in Africa alone (see figure III). Under this scenario, the population of Asia reaches 325 billion in 2300, that of Latin America and the Caribbean, 19 billion, and that of Oceania, 3 billion. In contrast, the population of Northern America grows to a mere half a billion and that of Europe decreases to just 0.1 billion (100 million).

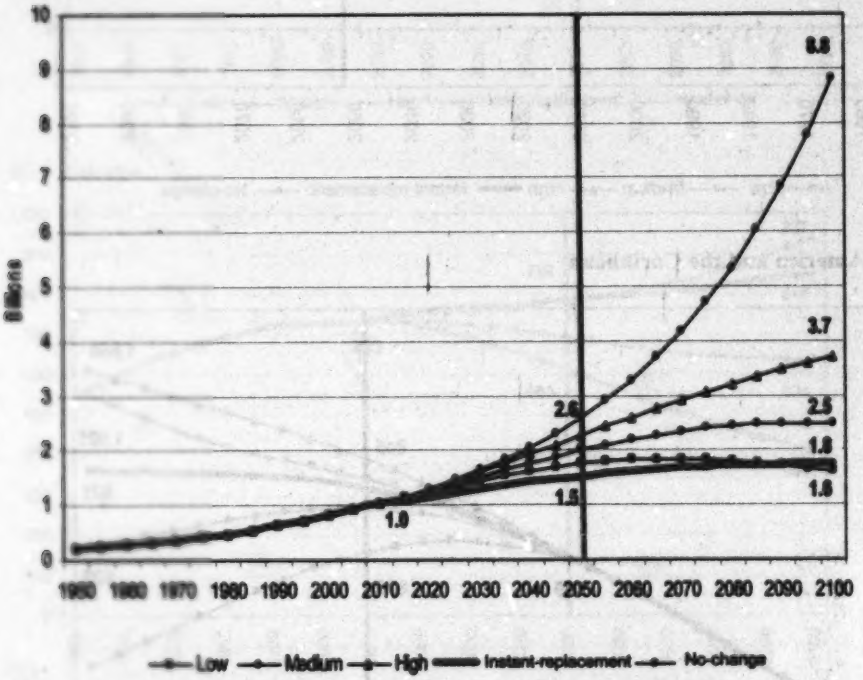
Figure III
Population in 2300 by major area according to the no-change scenario



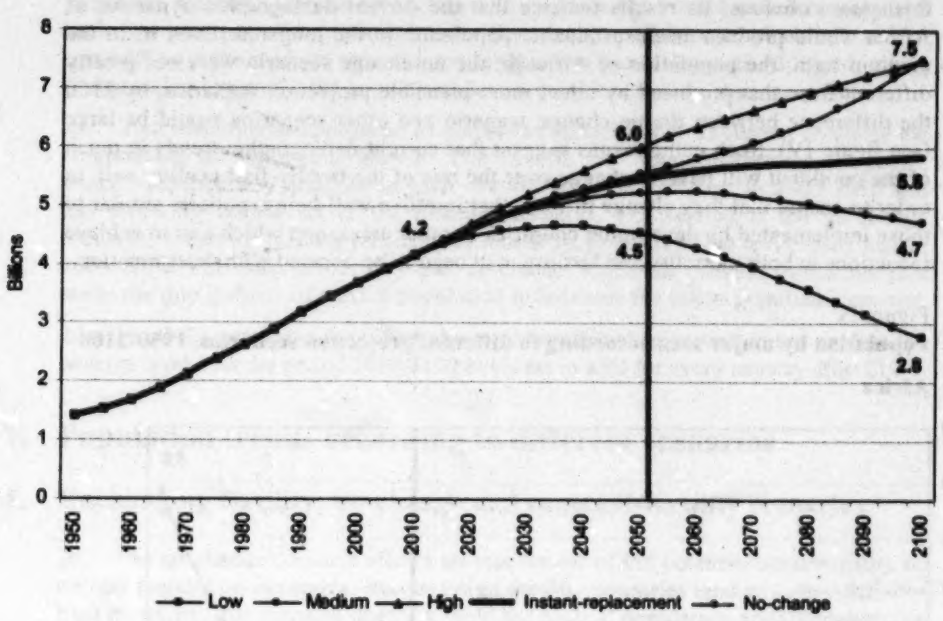
27. By exaggerating current population imbalances, the no-change scenario makes them more obvious. Its results indicate that the current demographic dynamics of Africa would produce an unsustainable population in the long run. Even if, in the medium term, the population of Africa in the no-change scenario were not greatly different from that produced by other, more plausible projection scenarios, by 2100 the difference between the no-change scenario and other scenarios would be large (see figure IV). Such comparisons suggest that current demographic trends in much of the continent will have to change over the rest of the twenty-first century and, in order to ensure that they change in ways that improve well-being, policies similar to those implemented by developing countries in other areas, and which aim to achieve reductions in both mortality and fertility, will need to be pursued with determination.

Figure IV
Population by major area according to different projection scenarios, 1950-2100

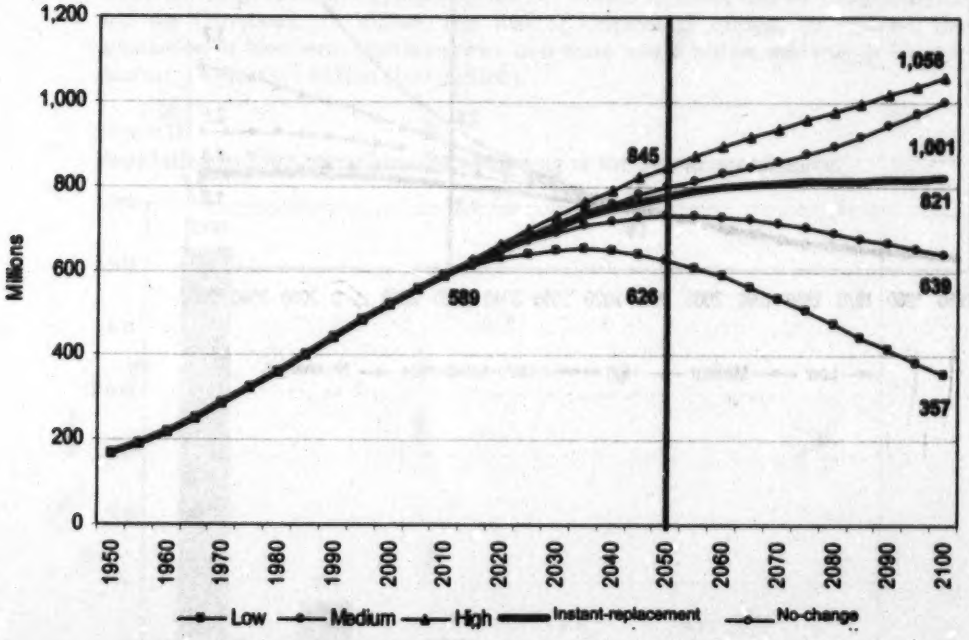
A. **Africa**



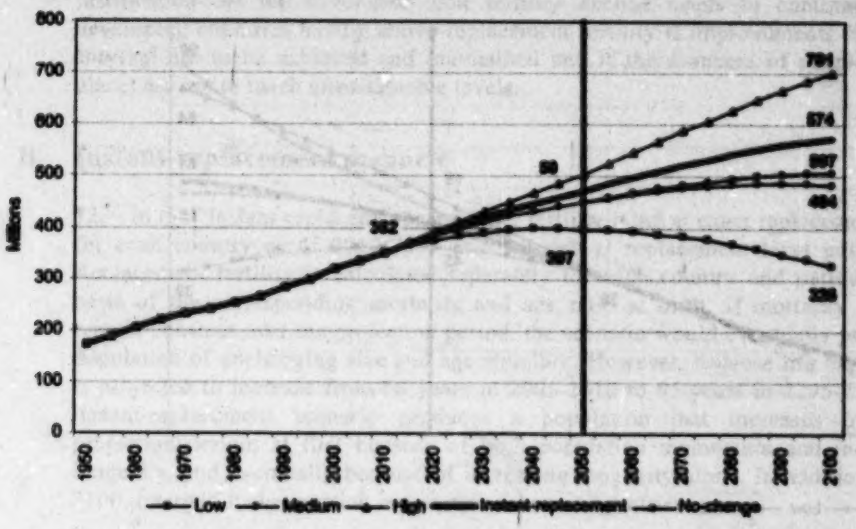
B. Asia



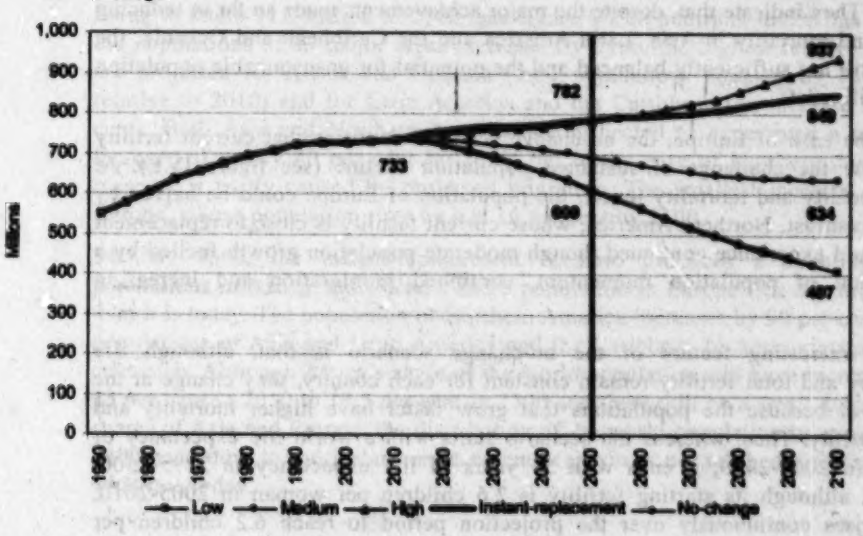
C. Latin America and the Caribbean



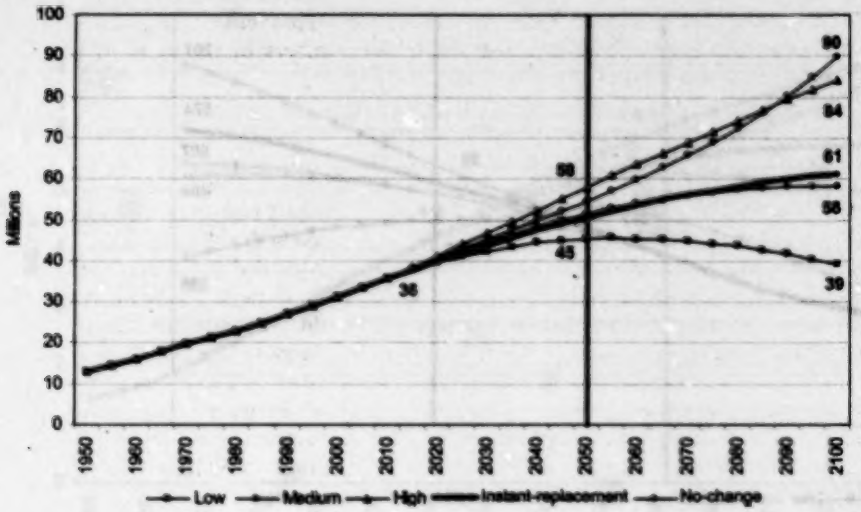
D. Northern America



E. Europe



F. Oceania



28. The results of the no-change scenario for other developing regions are also sobering. They indicate that, despite the major achievements made so far in reducing fertility and mortality in Asia, Latin America and the Caribbean and Oceania, the two are still not sufficiently balanced and the potential for unsustainable population growth still exists.

29. In the case of Europe, the no-change scenario confirms that current fertility levels pose the challenge of sustained population decline (see figure IV.E). At current fertility and mortality levels, the population of Europe could be halved by 2110. In contrast, Northern America, whose current fertility is close to replacement level, would experience continued though moderate population growth fuelled by a combination of population momentum, continued immigration and increasing longevity.

30. An interesting feature of the no-change scenario is that, although life expectancy and total fertility remain constant for each country, they change at the world level because the populations that grow faster have higher mortality and higher fertility. Thus, whereas the scenario starts with a world life expectancy of 68 years in 2005-2010, it ends with 53 years of life expectancy in 2295-2300. Similarly, although its starting fertility is 2.6 children per woman in 2005-2010, fertility rises continuously over the projection period to reach 6.2 children per woman in 2295-2300. That is, the no-change scenario produces a future world where not only does the population reach huge numbers but also where average well-being in terms of survival chances diminishes.

31. Whereas the no-change scenario maintains both fertility and mortality constant at their estimated levels for 2005-2010, the constant-fertility scenario assumes that *fertility remains* constant and that mortality continues to decline in all countries as in the medium scenario. Because of its declining mortality, the constant-fertility scenario yields a much larger world population in 2300 than the no-change scenario: 34 trillion people, compared with 3.5 trillion. Once more, most of that population is

in Africa (31 trillion). The results of the constant-fertility scenario provide further justification for the conclusion that fertility decline needs to continue in all developing countries having above-replacement fertility if improvements in human survival are to be achieved and maintained and if the numbers of people in the planet are not to reach unsustainable levels.

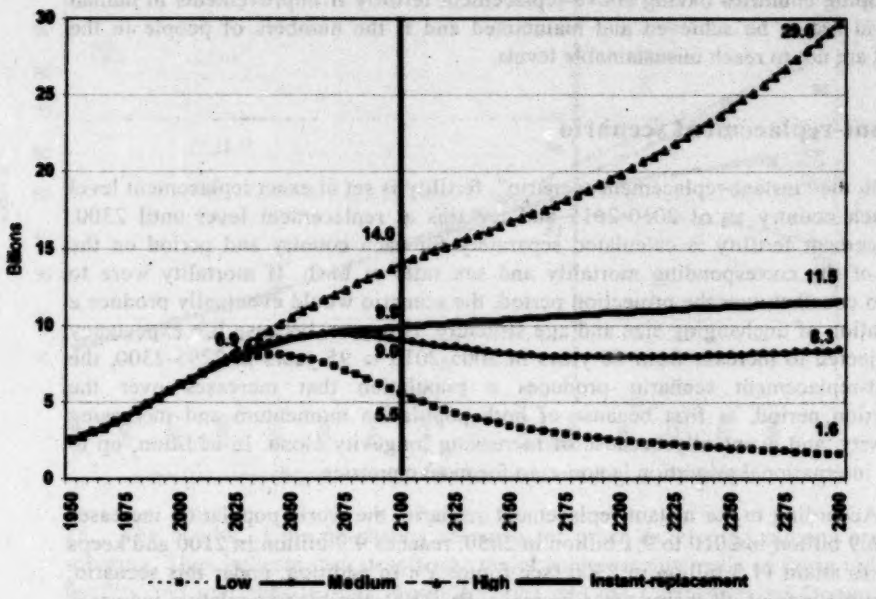
B. Instant-replacement scenario

32. In the "instant-replacement scenario", fertility is set at exact replacement level for each country as of 2010-2015 and remains at replacement level until 2300. Replacement fertility is calculated separately for each country and period on the basis of the corresponding mortality and sex ratio at birth. If mortality were to remain constant over the projection period, the scenario would eventually produce a population of unchanging size and age structure. However, because life expectancy is projected to increase from 68 years in 2005-2010 to 95 years in 2295-2300, the instant-replacement scenario produces a population that increases over the projection period, at first because of both population momentum and increasing longevity, and eventually because of increasing longevity alone. In addition, up to 2100, international migration is non-zero for most countries.

33. According to the instant-replacement scenario, the world population increases from 6.9 billion in 2010 to 9.1 billion in 2050, reaches 9.9 billion in 2100 and keeps rising to attain 11.5 billion in 2300 (see figure V). In addition, under this scenario, the populations of all major areas increase. By 2100, the highest relative increases are projected for Africa and Oceania (their populations increase by 71 per cent relative to 2010) and for Latin America and the Caribbean (an increase of 63 per cent). Both Asia and Northern America are projected to experience a population increase of nearly 40 per cent by 2100, but in the case of Northern America the increase is partly caused by projected migration. The smallest increase occurs in Europe, whose population rises by just 16 per cent by 2100.

34. By 2300, the instant-replacement scenario produces a doubling of the populations of Africa and Oceania and a population in Europe that is a third higher than it is today. The population of Northern America increases by 90 per cent and the populations of Asia and Latin America and the Caribbean by approximately 60 per cent each. Although Africa's share of the world population will have increased from 15 per cent in 2010 to 18.5 per cent in 2300 and there will be a small decline in the shares of Asia and Europe, the distribution of the world population by major area in 2300 according to the instant-replacement scenario is not markedly different from what it is today.

Figure V
Projected world population according to different projection scenarios, 1950-2300



35. Although the components of population growth at the world level may return in the future to a path where fertility is just low enough to counterbalance mortality but is not much higher or lower than that, in the medium term, replacement-level fertility is unlikely to prevail, mainly because fertility in Africa is still about 1.8 children higher than replacement level and fertility in Europe is 0.6 children lower than replacement level (see table 1). In all other major areas, fertility in 2010-2015 in the medium scenario is close to replacement level. Consequently, the instant-replacement scenario suggests that a reduction of today's population imbalances, whereby the low fertility of European countries would increase to replacement level and that of countries in Africa would decrease towards replacement level in as short a span as possible, would be sufficient to set world population on a path towards sustained but very slow population growth, provided increases in longevity continued over the long run. Such a path would also be the most likely to produce a future distribution of the world population by major area close to that which prevails today.

Table 1
Total fertility in 2010-2015 according to the medium and instant-replacement scenarios

	Medium	*Instant-replacement*
	Children per woman	
Africa	4.27	2.51
Asia	2.26	2.26
Latin America and the Caribbean	2.09	2.11
Northern America	1.98	2.08
Europe	1.53	2.10
Oceania	2.39	2.15

C. Low, medium and high scenarios

36. In the medium scenario, where fertility over the medium term is projected to decline in most developing countries, the world population increases at an ever-slowing pace until 2070, when it reaches 9.4 billion. At that point, because the fertility of every country is projected to remain below replacement level for a century, the medium scenario produces a declining world population that reaches a minimum at 7.9 billion in 2195. The eventual return of fertility to replacement level in all countries stops the decline and leads to a slowly increasing population that reaches 8.3 billion in 2300.

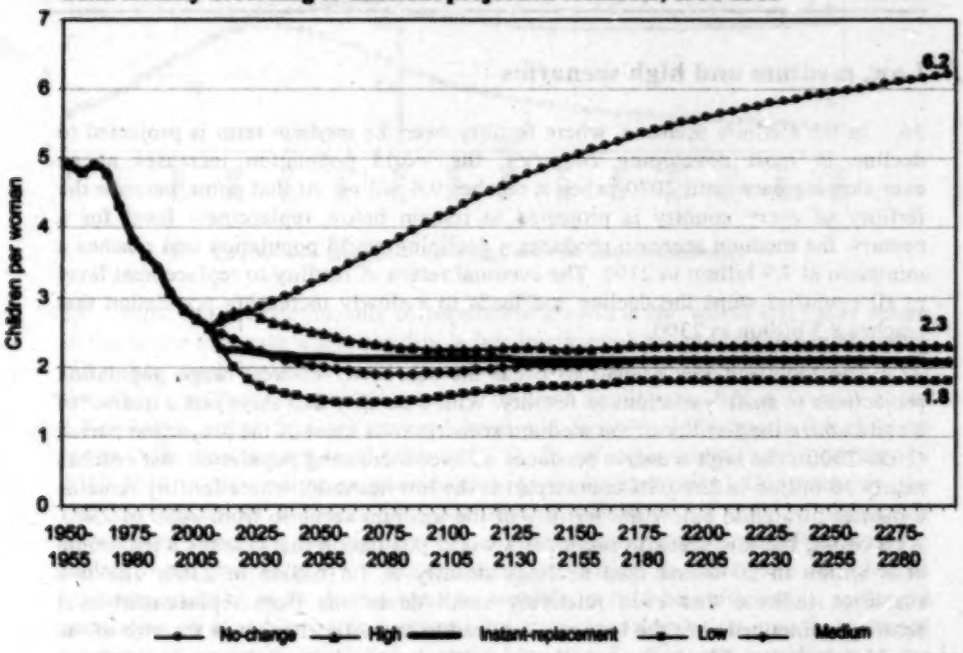
37. The high and low scenarios reveal the sensitivity of long-range population projections to small variations in fertility. With a fertility that stays just a quarter of a child above the fertility of the medium scenario over most of the projection period (2050-2300), the high scenario produces an ever-increasing population that reaches nearly 30 billion in 2300. Its counterpart is the low scenario, where fertility remains a quarter of a child below the fertility of the medium scenario from 2050 to 2300. As a result, the low scenario produces a world population that reaches a maximum at 8 billion in 2040 and then declines steadily to 1.6 billion in 2300. The two scenarios indicate that even relatively small deviations from replacement-level fertility maintained over the long run can lead to dramatic changes in the size of the world population. The high scenario, in particular, suggests that even in countries where fertility has already declined markedly from 1950 levels but remains above replacement level, additional reductions are necessary to avoid large population increases over the long run. The population of India, for instance, reaches 2.3 billion in 2100 in the high scenario, a population 0.9 billion higher than that projected by the medium scenario (1.4 billion). By 2300, the difference between the two is even higher (3.1 billion), with the high scenario producing a population of 4.4 billion.

38. In the medium scenario, the populations of Asia, Latin America and the Caribbean and Europe in 2300 are similar to those in 2010, those of Northern America and Oceania are about 50 per cent larger and that of Africa is twice as large. The high scenario produces populations in 2300 that are several times larger than those today: seven times for Africa, five times for Northern America and Oceania, four times for Asia and Latin America and the Caribbean, and three times

for Europe. In sharp contrast, the low scenario produces smaller populations in 2300 than the populations of today: Asia and Latin America and the Caribbean drop to a fifth of their current size, Europe drops to a fourth, Africa to a third, and Northern America and Oceania to about two fifths.

39. Given their divergent trends, the low and high scenarios produce global populations that differ more as time elapses (see figure V). In 2050, their difference is 2.5 billion; that difference rises to 8.5 billion in 2100 and surpasses 28 billion in 2300. Such increasing differences between the high and low scenarios mean that, in order to attain sustainable population growth over the long run, future fertility has to vary over a narrower range around replacement level than the one encompassed by the low and high scenarios (see figure VI).

Figure VI
Total fertility according to different projection scenarios, 1950-2300



D. Adding new billions

40. Another way of assessing the implications of different fertility trends for population growth is to consider the time it will take to gain an additional 1 billion people according to different projection scenarios (see table 2). Because of population momentum, the eighth billion will be added in a relatively short time in every projection scenario: 10 years in the high, 15 years in the medium and instant-replacement scenarios, and 17 years in the low scenario. Important differences appear after the eighth billion is reached. Thus, the low scenario never adds another billion, the high scenario adds one in just 11 years, the medium scenario does so in 20 years and the instant-replacement scenario in 21 years. From there on, only the

high and instant-replacement scenarios keep adding billions. The instant-replacement scenario does so at ever-increasing intervals (62 years for the tenth billion and 115 years for the eleventh). In sharp contrast, the high scenario adds a billion every 12 to 15 years over the rest of the twenty-first century and at slightly longer but still relatively short intervals over the rest of the projection period.

Table 2
Years during which the world population reached or is expected to reach each additional billion according to different projection scenarios

	Low		*Medium*		*High*		*Instant-replacement*	
Population (billions)	*Year reached*	*Number of years elapsed*	*Year reached*	*Number of years elapsed*	*Year reached*	*Number of years elapsed*	*Year reached*	*Number of years elapsed*
1			1804					
2			1927	122				
3			1960	33				
4			1974	14				
5			1987	13				
6			1999	12				
7	2011	12	2011	12	2011	12	2011	12
8	2038	17	2025	14	2022	10	2026	15
9			2045	20	2033	11	2047	21
10					2045	12	2110	62
11					2057	12	2225	115
12					2070	13		
13					2085	15		
14					2100	15		
15					2118	18		

41. Although there is no consensus on the maximum number of people that the Earth can support, and recent history has accommodated a world population that has been growing by a billion every 12 to 14 years without witnessing major collapses, the planet is nevertheless beginning to show signs of stress. Without major changes in technology, maintaining such a pace of population growth over the long run will add several billion people over the life of each generation and make it very difficult if not impossible to continue improving standards of living without severely straining the planet's resources.

E. Population prospects by major area

42. The results of the projection scenarios by major area confirm that differences in population trends since the 1970s have set the stage for the future divergence of population trends among major areas. In the case of Africa, for instance, all projection scenarios produce a growing population until at least 2100 (figure IV.A). The medium scenario, which projects a continued reduction of fertility at a moderate pace until it reaches 1.85 children per woman around 2100 produces for

Africa a population of 2.5 billion in 2100, one and a half times larger than it is today. If future fertility declines more slowly than projected in the medium scenario, the population of Africa could reach 3.7 billion in 2100, as it does in the high scenario. Even if all countries in Africa were to reach replacement level in 2010-2015 and maintain it, Africa's population would increase 80 per cent by 2100, to 1.8 billion.

43. For Asia, both the low and the medium scenarios project a declining population by 2100 because a number of populous countries in that major area already have below-replacement fertility or have fertility levels that are not far from replacement level. For that reason, the instant-replacement scenario produces a higher population for Asia in 2100 than the low and medium scenarios do. Given past trends, it seems reasonable to expect that the population of Asia will cease increasing over the course of the twenty-first century. However, that outcome depends on whether all countries in the continent, in particular in the Indian subcontinent, reduce their fertility to below-replacement level. The no-change scenario, which produces initially a lower population for Asia than the high scenario, eventually catches up with the latter and both produce 7.5 billion inhabitants for the continent in 2100 (see figure IV.B).

44. For Latin America and the Caribbean, as for Asia, the instant-replacement scenario produces a higher population in 2100 (821 million) than the low or medium scenarios (639 million and 357 million, respectively) because most countries in that major area already have fertility close to or below replacement level. Without further declines in current fertility, however, the population of Latin America and the Caribbean would keep on increasing, as the no-change scenario indicates, and could reach 1 billion by 2100. Therefore, as in the case of Asian countries, reductions in fertility are still necessary in order for the population of Latin America and the Carjbbean to move towards stabilization during the twenty-first century.

45. Northern America stands out because it is the only major area where the no-change scenario produces a population in 2100 that is fairly close to that yielded by the medium scenario: 507 million, compared with 484 million. The similarity indicates that the below-replacement fertility projected in the medium scenario has a similar effect on population growth as constant mortality has at the 2005-2010 levels in the no-change scenario. Because of declining mortality, the instant-replacement scenario produces a significantly higher population for Northern America in 2100 (574 million). Given past trends, the future population of Northern America seems likely to fall somewhere between the medium and the instant-replacement scenarios because its fertility is not expected to drop to the levels projected in the low scenario or increase to those projected by the high scenario.

46. In contrast to Northern America, Europe is at a stage where population change similar to that followed by the low scenario is not out of the question. The no-change scenario and the low scenario produce similarly low populations for Europe in 2100: 407 million, a decline of 44 per cent with respect to the 733 million in 2010 (see figure IV.E). Until at least 2100, the effect of lower fertility projected by the low scenario on future population growth is similar to that of the constant mortality projected in the no-change scenario. Because of the persistence of low fertility in Europe, even the medium scenario, which projects an increase in fertility and an eventual return to replacement level, produces a drop in Europe's population by 2100: to 634 million, a 14 per cent decline with respect to 2010. Europe's

fertility would have to return to replacement level sooner than it does in the medium scenario in order to avoid population reductions. Thus, the instant-replacement scenario produces an increasing population and so does the high scenario, in which Europe's projected fertility returns early to levels well above replacement. Given current trends, Europe's population seems unlikely to follow either of the two scenarios over the midterm future.

47. Oceania contains two very distinct populations: that of developed Australia and New Zealand and that of the developing countries in the Pacific. Partly because of that composition, the no-change scenario, which starts by producing populations close to those yielded by the medium and instant-replacement scenarios, diverges from them to produce a population of 90 million in 2100, equivalent to nearly three times the population of Oceania in 2010. In addition, because Australia and New Zealand already have low fertility, the medium and instant-replacement scenarios produce similar populations in 2100 (58 million, compared with 61 million). Given past fertility trends in the developing countries of Oceania, its future population is more likely to lie between the medium and high scenarios than towards the low scenario. Therefore, an important increase in its population is expected over the coming decades even if the fertility of its developing countries declines as projected in the medium scenario.

F. Population prospects for the most populous countries in the developing world

48. In 2010, there were 18 countries in the developing world with populations of at least 50 million (see table 3). Together they accounted for 63 per cent of the world population and include China and India, a further nine countries in Asia, the five most populous countries of Africa, Brazil and Mexico in Latin America (see table 3). The 18 countries are at very different stages of the transition to low fertility. Thus, whereas Brazil, China, Iran (Islamic Republic of) and Thailand are reckoned to have below-replacement fertility, the Democratic Republic of the Congo, Ethiopia and Nigeria still have fertility levels above 5 children per woman. The rest have fertility ranging from close to replacement level (Turkey and Viet Nam) to 4 children per woman (Pakistan). This variety of current fertility levels results in very different prospects for future population growth.

49. In order to gauge the potential for future growth, the number of times the current population is projected to increase by 2100 according to the no-change scenario should be considered (see table 3). Under unchanging fertility and mortality, the population of the Democratic Republic of the Congo would increase 23 times over the next 90 years, that of Ethiopia 17 times, and that of Nigeria 13.5 times. The population of Pakistan would increase 7.5 times, while that of the Philippines would quadruple, the populations of India and Egypt would triple, and that of Bangladesh would double. By contrast, the populations of both China and Thailand would decline, by about 30 per cent in the case of China. The rest of the populous developing countries would see their populations increase between 2010 and 2100 by amounts ranging from 10 per cent in Iran (Islamic Republic of) to 90 per cent in South Africa. Such results suggest that current levels of fertility are unlikely to be sustainable over the long run in most of the populous countries of Africa and in several of those in Asia, particularly those whose population would at least triple by 2100 under the no-change scenario.

Table 3
Ratio of population in 2100 to that in 2010 according to projection scenarios for selected countries with 50 million or more inhabitants

Country	*No-change*	*Instant-replacement*	*Low*	*Medium*	*High*	*Total fertility in 2005-2010*
China	0.7	1.2	0.5	0.8	1.3	1.77
Thailand	0.9	1.3	0.6	1.0	1.5	1.81
Iran (Islamic Republic of)	1.1	1.5	0.6	1.1	1.8	1.83
Brazil	1.2	1.4	0.5	0.9	1.5	1.90
Mexico	1.4	1.2	0.4	0.9	1.6	2.21
Viet Nam	1.4	1.4	0.7	1.1	1.8	2.08
Turkey	1.5	1.5	0.7	1.2	1.9	2.13
Indonesia	1.6	1.4	0.6	1.1	1.8	2.19
Myanmar	1.7	1.5	0.7	1.2	1.8	2.32
South Africa	1.9	1.4	0.6	1.1	1.7	2.55
Bangladesh	2.0	1.5	0.7	1.2	2.0	2.36
India	2.7	1.5	0.7	1.2	1.9	2.76
Egypt	3.4	1.6	0.9	1.6	2.5	2.89
Philippines	4.0	1.5	1.0	1.6	2.5	3.11
Pakistan	7.5	1.7	1.3	2.1	3.1	4.00
Nigeria	13.5	1.7	1.4	2.1	3.1	5.32
Ethiopia	17.2	1.8	1.6	2.4	3.6	5.38
Democratic Republic of the Congo	23.4	1.8	1.8	2.7	4.0	6.07

50. In the majority of the populous developing countries, further fertility reductions would lead to more moderate population increases, as indicated by the results of the medium scenario (see table 3). According to that scenario, the population of the Democratic Republic of the Congo would at most triple by 2100, those of Ethiopia, Nigeria and Pakistan would more than double, and those of Egypt and the Philippines would increase by 60 per cent. With the exception of Brazil, China, Mexico and Thailand, whose populations would decline or remain the same, the rest of the populous developing countries would see their populations increase by between 10 and 20 per cent in the medium scenario. To achieve such moderate population increases, all populous developing countries would have to reduce their fertility to below-replacement level and maintain it below replacement for a lengthy period. If future fertility were to remain at replacement level, as in the instant-replacement scenario, the 2100 population of the majority of populous developing countries would be higher than that produced by the medium scenario, a result underscoring the importance of attaining and maintaining fertility below replacement level for lengthy periods in order to accelerate the attainment of stability.

G. Population prospects for countries or areas with the fastest-growing populations

51. The 20 countries or areas that had at least 1 million inhabitants in 2010 and are also projected to have the fastest-growing populations during 2010-2100 in the medium scenario are listed in table 4. In 2010, they accounted for 5 per cent of the world population and most of them are least developed countries. All have populations that have grown rapidly since 1950. Thus, the populations of Kenya, Niger and Uganda have increased six-fold and those of most of the other countries considered have at least quadrupled. Only Afghanistan, Guinea, Guinea-Bissau and Timor-Leste have experienced just a tripling of their populations.

52. Because of their high fertility, the fast-growing populations are expected to increase multiple times by 2100 according to the no-change scenario. If fertility and mortality remained constant until 2100 at 2005-2010 levels, Niger would see its population increase 57 times, Uganda 34 times and Timor-Leste nearly 31 times. Kenya would experience the smallest population increase among the countries considered and yet its population would increase 14 times by 2100 under the no-change scenario.

Table 4
Ratio of population in 2100 to that in 2010 according to projection scenarios for countries or areas with the fastest-growing populations

Country	*No-change*	*Instant-replacement*	*Low*	*Medium*	*High*	*Total fertility in 2005-2010*
Kenya	14.2	1.8	1.7	2.7	4.1	5.0
Rwanda	14.6	1.8	1.8	2.7	4.0	5.4
Madagascar	14.7	1.9	1.7	2.7	4.2	4.8
Liberia	15.7	1.7	1.8	2.8	4.2	5.1
Guinea-Bissau	16.3	1.6	2.1	3.1	4.4	5.7
Yemen	17.9	1.9	1.8	2.8	4.2	5.3
Occupied Palestinian Territory	19.0	1.9	2.0	3.1	4.6	5.1
Angola	19.1	1.8	2.0	3.0	4.4	5.8
Benin	19.4	1.8	2.2	3.3	4.9	5.5
Guinea	19.6	1.9	2.2	3.3	4.7	5.5
Malawi	20.8	1.8	2.1	3.3	4.8	5.6
Somalia	21.3	1.7	2.7	3.9	5.4	6.4
United Republic of Tanzania	21.4	1.8	2.3	3.6	5.3	5.6
Zambia	22.7	1.8	1.8	2.9	4.2	5.9
Afghanistan	24.6	1.8	2.6	3.7	5.1	6.6
Chad	24.6	1.8	2.4	3.5	5.0	6.2
Burkina Faso	29.2	1.9	2.4	3.6	5.1	5.9
Timor-Leste	30.5	1.8	3.0	4.4	6.2	6.5
Uganda	33.7	1.9	2.7	4.0	5.8	6.4
Niger	56.8	2.0	5.3	7.3	9.8	7.1

53. If their fertility were to drop below replacement level during the twenty-first century, as it has in the medium scenario, the population of Niger would increase 7 times by 2100, the populations of Timor-Leste and Uganda would quadruple. The majority of the other fast-growing populations would at least triple by 2100. Population increases would be even higher according to the high scenario, where the populations of fast-growing countries would at least quadruple.

54. Given that fertility has declined relatively slowly or has even increased in the 20 countries considered, it is likely that those countries will achieve at best the fertility reductions projected in the medium scenario, and more effective programmes are therefore urgently needed in order to improve reproductive health and expand access to modern contraception together with measures to accelerate the reduction of child mortality and to increase educational attainment, particularly of girls.

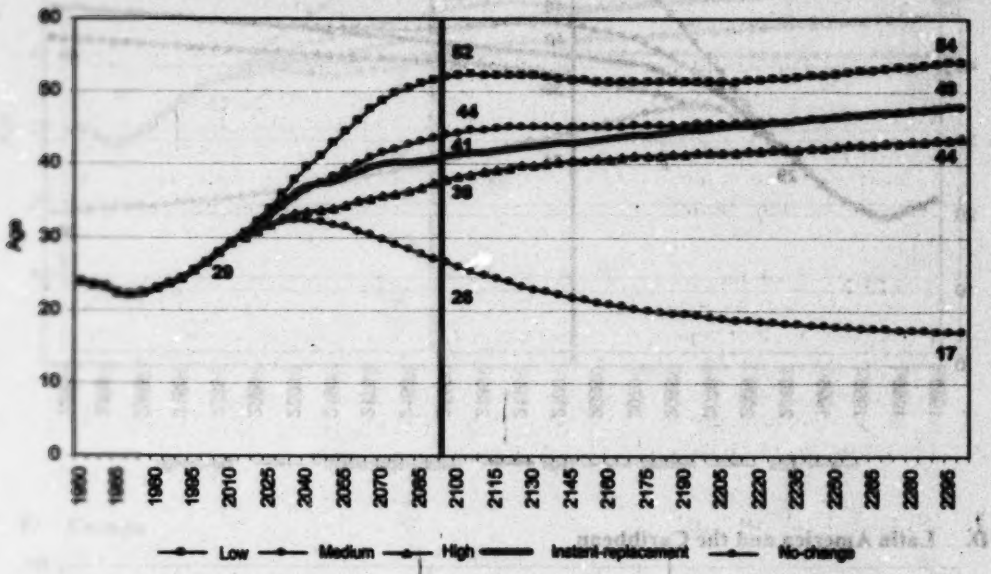
55. Even if all the countries with rapidly growing populations would achieve replacement fertility today, their populations would still nearly double by 2100, largely as a result of population momentum. Consequently, the reductions of fertility that are likely to be achieved by increased efforts to attain the Millennium Development Goals will not stop their populations from growing over the medium term; slowing that growth, however, will expand the options that families and communities have to improve their well-being.

VI. Population ageing

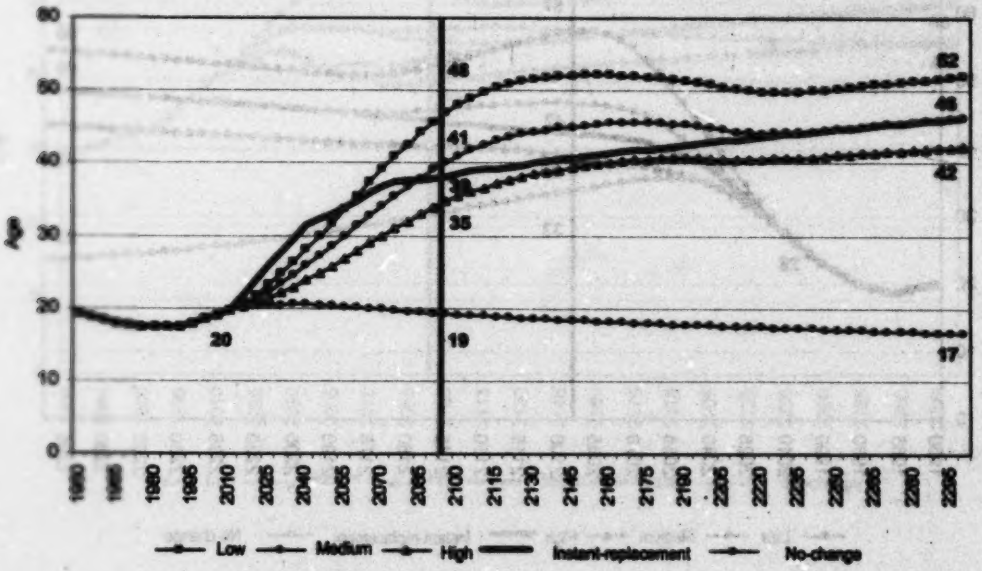
56. An unavoidable consequence of reductions in fertility is population ageing. Because future fertility follows different paths in the various projection scenarios, it is useful to consider their implications for population ageing. To do so, the median age of the population, that is, the age that divides the population in two equal parts, is used as an indicator of population ageing. As a population ages, the median age increases, as it does in most of the projection scenarios shown in figure VII.

Figure VII
Median age for the world and major areas according to different projection scenarios, 1950-2300

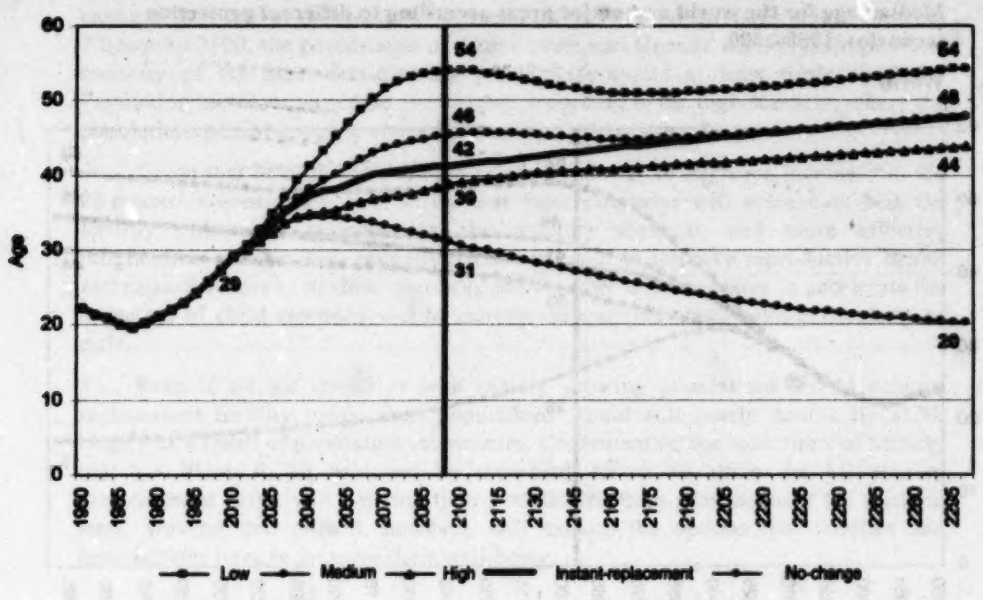
A. World



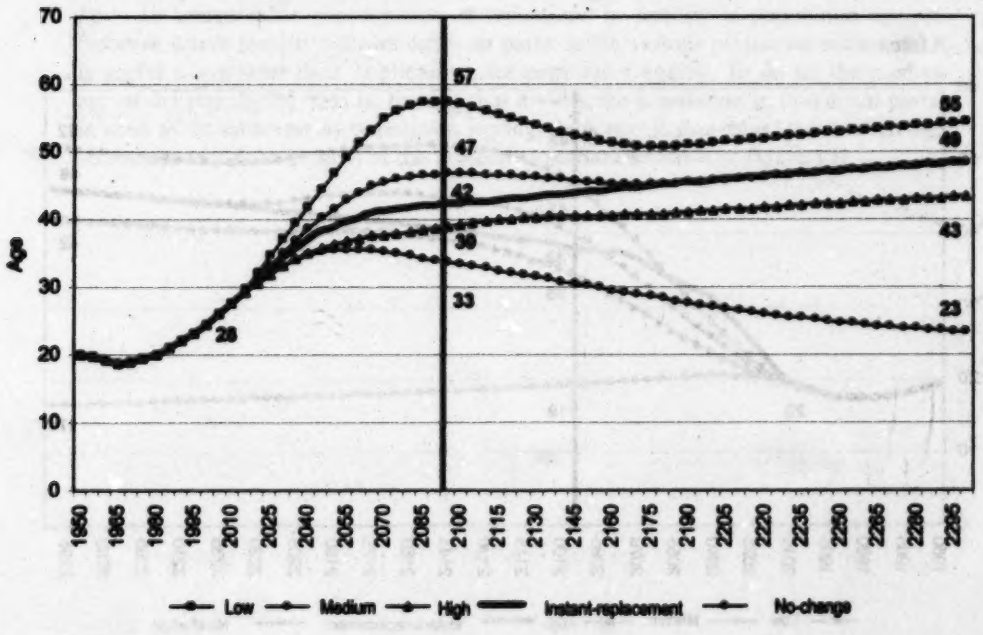
B. Africa



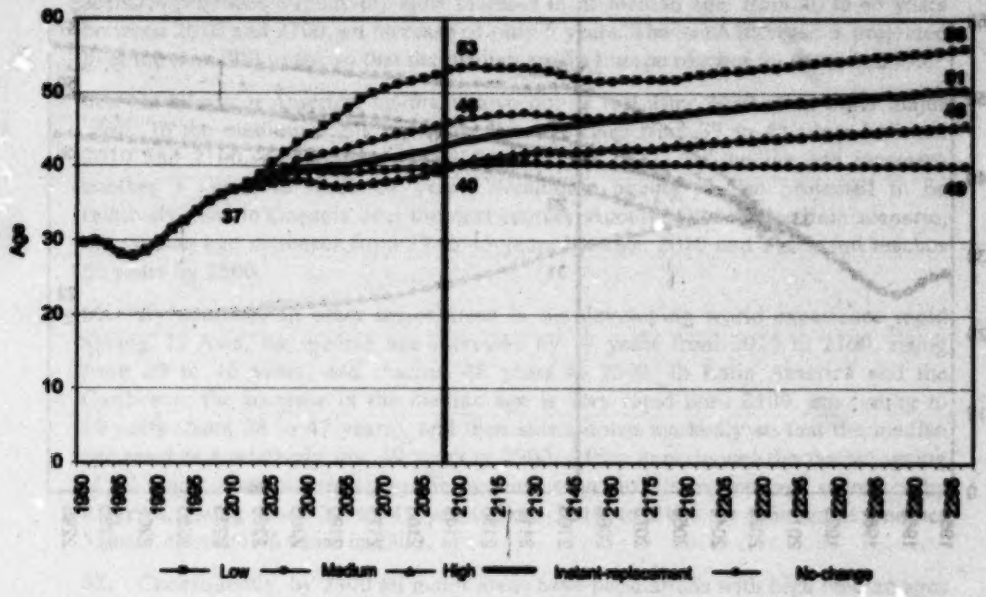
C. Asia



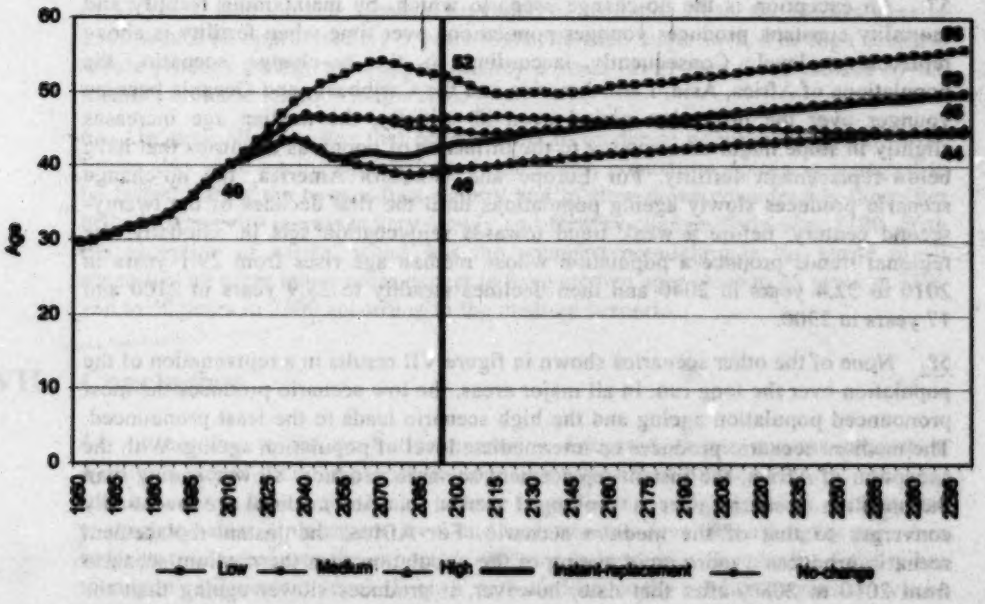
D. Latin America and the Caribbean



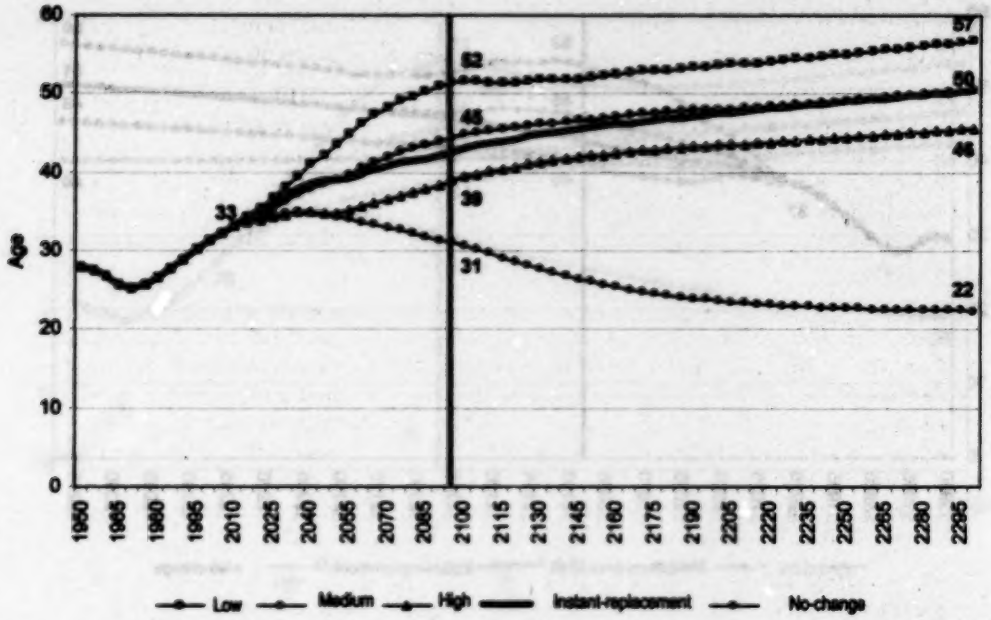
E. Northern America



F. Europe



G. Oceania



57. An exception is the no-change scenario which, by maintaining fertility and mortality constant, produces younger populations over time when fertility is above replacement level. Consequently, according to the no-change scenario, the populations of Africa, Asia, Latin America and the Caribbean, and Oceania become younger over the projection period even if, initially, the median age increases slightly in some major areas owing to the influence of populous countries that have below-replacement fertility. For Europe and Northern America, the no-change scenario produces slowly ageing populations until the first decades of the twenty-second century, before a weak trend towards rejuvenation sets in. Globally, the regional trends produce a population whose median age rises from 29.1 years in 2010 to 32.4 years in 2040 and then declines steadily to 25.9 years in 2100 and 17 years in 2300.

58. None of the other scenarios shown in figure VII results in a rejuvenation of the population over the long run. In all major areas, the low scenario produces the most pronounced population ageing and the high scenario leads to the least pronounced. The medium scenario produces an intermediate level of population ageing. With the exception of Africa, the instant-replacement scenario produces slower ageing than the medium scenario over a prolonged period but its median age eventually converges to that of the medium scenario. For Africa, the instant-replacement scenario produces a more rapid ageing of the population than the medium scenario from 2010 to 2080, after that date, however, it produces slower ageing than the medium scenario until the median ages of both converge around 2240.

59. Globally, the median age rises from 29 years in 2010 to 44 in 2100 in the medium scenario, an increase of 15 years. However, ageing slows down considerably thereafter, with the median age rising only 4 years more by 2300, to

48 years. Because Europe is already far advanced in the ageing process, the medium scenario produces a relatively slow increase in its median age: from 40 to 45 years between 2010 and 2100, an increase of only 5 years. The same increase is projected over the next 200 years, so that the median age in Europe reaches 50 years in 2300.

60. In Northern America, ageing is also not as fast after 2010 as in other major areas. In the medium scenario, its median age rises from 37 to 46 years between 2010 and 2100, an increase of just 9 years. By 2300, the median age increases another 5 years, to reach 51 years. Population ageing is also projected to be relatively slow in Oceania over the next century. According to the medium scenario, the median age increases from 33 to 45 years between 2010 and 2100, and reaches 50 years by 2300.

61. By contrast, all other major areas in the developing world experience rapid ageing. In Asia, the median age increases by 17 years from 2010 to 2100, rising from 29 to 46 years, and reaches 48 years in 2300. In Latin America and the Caribbean, the increase in the median age is very rapid until 2100, amounting to 19 years (from 28 to 47 years), and then slows down markedly so that the median age reaches a relatively low 49 years in 2300. Africa experiences the fastest ageing of all major areas according to the medium scenario. Its median age increases by 21 years, rising from 20 to 41 years from 2010 to 2100. It then gains another 5 years, to reach 46 years in 2300.

62. Consequently, by 2300 all major areas have populations with high median ages according to the medium scenario. Africa has the youngest population, with a median age of 46 years, while Northern America has the oldest, with a median age of 51 years. Had the low scenario prevailed in all major areas, the median ages in 2300 would be approximately 5 years higher in each major area. The high scenario would produce median ages approximately 5 years lower than those yielded by the medium scenario for each major area.

63. In sum, all scenarios that produce low to moderate population growth in the future also yield ageing populations. In all cases, population ageing is expected to be fastest during the twenty-first century and to slow down considerably thereafter because longevity increases very slowly and fertility changes little after 2100. With the exception of Africa, which has the youngest population in the world in all scenarios, all other major areas expect to have median ages close to 45 years in 2100 and to 50 years in 2300 according to the medium scenario.

VII. Conclusion

64. According to the projection scenarios discussed above, current population dynamics would produce excessive population growth if maintained over the long run. In order to have a reasonable chance to stabilize world population, fertility has to drop to below-replacement level and maintain that level for a lengthy period in order to counterbalance the expected increases in longevity. Eventually, fertility has to regain replacement level. Such a path underpins the medium scenario, whose world population peaks at 9.4 billion in 2070, declines to 7.9 billion in 2195 and rises to 8.3 billion in 2300. There is no guarantee, however, that this scenario will become a reality because high-fertility countries may not reduce their fertility sufficiently fast or those with intermediate fertility levels may see them stagnate above replacement level.

65. The high scenario, which produces a world population of nearly 30 billion in 2300, even though its fertility remains mostly between 2.2 and 2.3 children per woman, validates the imperative of continuing to reduce fertility to replacement level or below in all countries whose fertility is still above replacement level. Efforts to reduce fertility rapidly are especially needed in the fast-growing countries of Africa and Asia. In both major areas, but particularly in Africa, current fertility levels, if maintained, would lead to unsustainable numbers of people in the long run. Even with significant fertility reductions, Africa's population will likely increase by 150 per cent by 2100, and many of its countries will see their populations increase four-fold or more.

66. Even countries with intermediate fertility need to reduce it to replacement level or below if they wish to avert continuous population increases to unsustainable levels, and low fertility countries need to achieve comparatively small increases in fertility in order to avert rapid reductions of the population. Although such changes are expected to happen, there is no certainty that they will.

67. The rapid population increases in recent decades are occurring on a planet that is increasingly showing signs of strain. If a population increase that adds 1 billion new inhabitants every 12 or 15 years is to be averted, global fertility must eventually reach and maintain replacement level. According to Justice Oliver Wendell Holmes: "The way in which the inevitable comes to pass is through effort". In this regard, the reduction of fertility may be inevitable, but considerable effort is nonetheless required to make it a reality over the next few decades.

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Programme implementation and future programme of work of the Secretariat in the field of population

Programme implementation and progress of work in the field of population in 2010: Population Division, Department of Economic and Social Affairs

Report of the Secretary-General

Summary

The present report reviews the progress made by the Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat in implementing its programme of work in the field of population in 2010. It covers the activities of the Population Division on the analysis of fertility, mortality and international migration; the preparation of world population estimates and projections; the monitoring of population policies; the analysis of the interrelations between population and development; and the monitoring and dissemination of population information. The report also covers other major activities carried out by the Population Division, including the substantive servicing of intergovernmental bodies, the preparation of parliamentary documentation and technical publications, the organization of expert meetings and the dissemination of results, including through the Internet.

The objective of the subprogramme on population is to strengthen the international community's capacity to effectively address current and emerging population issues and to integrate the population dimensions into the development agenda at the national and international levels. The Commission on Population and Development provides the subprogramme with intergovernmental guidance.

The Commission may wish to take note of this report.

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I. Introduction

1. The Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat is responsible for the implementation of the subprogramme on population of the United Nations Secretariat. The subprogramme takes account of the recommendations of the 1994 International Conference on Population and Development, the outcome of the twenty-first special session of the General Assembly (resolution S-21/2, annex) on key actions for the further implementation of the Programme of Action of the International Conference on Population and Development,[1] and the outcomes of other relevant international conferences and summits, including the United Nations Millennium Declaration (resolution 55/2) and the 2005 World Summit Outcome (resolution 60/1). It also responds to the resolutions and decisions of the Commission on Population and Development, in particular resolution 2004/1 on the work programme in the field of population (E/2004/25, chap. I, sect. B), as well as relevant resolutions of the General Assembly and the Economic and Social Council.

2. As described in the strategic framework for the period 2010-2011, the objective of the subprogramme on population is to strengthen the international community's capacity to effectively address current and emerging population issues and to integrate the population dimensions into the development agenda at the national and international levels (see A/63/6/Rev.1, programme 7, subprogramme 6). The Commission on Population and Development provides intergovernmental guidance to the subprogramme.

3. The expected accomplishments for the subprogramme, according to the programme budget for the biennium 2010-2011 (A/64/6 (Sect. 9)), are to:

(a) Effectively facilitate review by Member States of progress made in the implementation of the Programme of Action of the International Conference on Population and Development, the outcome of the twenty-first special session of the General Assembly, and the outcomes of the United Nations conferences and summits in the social and economic fields related to population and development, including the Millennium Summit and the 2005 World Summit;

(b) Enhance awareness of the international community of new and emerging population issues and increased knowledge and understanding, at the national level, particularly in the areas of fertility, mortality, migration, HIV/AIDS, urbanization, population growth, population ageing and the environment;

(c) Improve accessibility and timeliness of population information and data for use by Member States, the United Nations system, civil society and academia.

4. The Population Division collaborates closely with the agencies, funds, programmes and bodies of the United Nations system in the implementation of the work programme and in the follow-up to the International Conference on Population and Development. United Nations missions, national Government offices, United Nations offices, researchers, media representatives and the public regularly consult the Population Division regarding data, information and analyses on population and development issues.

[1] *Report of the International Conference on Population and Development, Cairo, 5-13 September 1994* (United Nations publication, Sales No. E.95.XIII.18), chap. I, resolution 1, annex.

5. The present report focuses on the research and other activities carried out by the Population Division during 2010, grouped by thematic area, and provides a substantive summary of the activities and outputs of the Division, which include the substantive servicing of intergovernmental bodies, the preparation of parliamentary documentation and technical publications, the organization of expert meetings and the dissemination of results, including various forms of outreach through the Internet. A list of activities and outputs is presented in the annex to this report.

II. Fertility and family planning

6. In order to enhance awareness about key issues to be addressed by the Commission on Population and Development at its forty-fourth session, the Population Division organized an Expert Panel on Fertility, Reproductive Health and Development that took place at United Nations Headquarters in New York on 7 December 2010. The Panel featured four experts from academic and research institutions who presented new evidence on the development impact of fertility decline, improvements in access to family planning and other reproductive health services, and reductions of inequities in reproductive health. The participants in the Panel provided evidence that expanded access to reproductive health could accelerate fertility decline in developing countries and lead to faster progress in the achievement of key Millennium Development Goals. The presentations made can be accessed on the Population Division's website.[2]

7. As part of its task of producing and disseminating estimates of the determinants of fertility, the Population Division prepared a CD-ROM entitled *World Contraceptive Use 2010*. The CD-ROM presents estimates of levels and trends in contraceptive use for 193 countries or areas, including data by method used and estimates of unmet need for family planning. This CD-ROM provides more detailed and comprehensive data than previous editions. In particular, it provides time-series data for each country covering a period that, as far as possible, starts in 1950. It also presents data highlighting the level of use of long-acting and permanent methods of contraception as well as male-oriented methods. The time series presented include data on the level of use of any contraceptive method as well as the level of use of modern methods and of traditional methods separately. Data on unmet need for family planning are also presented as time series. Estimated regional averages of contraceptive use relative to any method, any modern method and any traditional method as well as those for unmet need for family planning are included. In 2009 at the world level, 63 per cent of women of reproductive age who were married or in a union were contraceptive users. Contraceptive prevalence ranged from 3 per cent in Chad to 88 per cent in Norway, and was higher in the more developed regions (72 per cent) than in the less developed regions (61 per cent). Contraceptive prevalence remained low in sub-Saharan Africa, at 22 per cent, and unmet need for contraception was particularly high in that region, with 31 of the 40 countries with data since 2000 reporting that 20 per cent or more of women aged 15 to 49 who were married or in a union had an unmet need for contraception. Modern contraceptive methods are the most commonly used (by 56 per cent of women of reproductive age that are married or in a union in 2009), surpassing traditional methods by a factor of three or more in all regions except Middle Africa,

[2] www.un.org/esa/population.

Western Africa and Western Asia. The information contained in the CD-ROM is available on the Population Division's website.[2]

8. The in-depth analysis of fertility trends and their main proximate determinants is presented in *World Fertility Report 2007*,[3] which includes key indicators of fertility, nuptiality, contraceptive use and population policies regarding childbearing for 192 countries or areas. The data refer to dates around 1970 and around 2000, thus covering a period of unprecedented change in reproductive behaviour. According to the data presented, total fertility fell in all but one of the 132 countries or areas with data available. In the most recent period covered, 59 countries or areas had a total fertility below 2.1 children per woman, the level required to ensure the replacement of generations in low mortality populations. Since 1970, fertility dropped more in developing countries than in developed countries, because fertility levels were higher in the former. Thus, more than a quarter of all developing countries experienced fertility declines of at least 3.0 children per woman between the 1970s and around 2000. However, fertility levels among developing countries still vary widely. Total fertility is below replacement level in 18 of 71 developing countries or areas with data for the two periods but remains above 4.0 children per woman in 10 countries or areas. The *World Fertility Report 2007* includes a CD-ROM that contains a comprehensive set of indicators related to childbearing for each country, including time-series data derived from various sources. An electronic version of the report can be accessed on the Division's website.

9. To raise awareness about the benefits of fertility decline and family planning for making progress in achieving the internationally agreed development goals, the Population Division produced two issues of *Population Facts*, a new series that concisely highlights the latest evidence on population and development. "Speeding progress on the Millennium Development Goals" (No. 2010/1) describes how greater access to family planning can improve maternal and child health and argues that the least developed countries, where unmet need for family planning is still high, have the most to gain from strengthened family planning programmes. "Accelerating achievement of the MDGs by lowering fertility: Overcoming the challenges of high population growth in the least developed countries" (No. 2010/5) focuses on how the maintenance of high fertility results in a high number of dependants in the least developed countries, making it more difficult to invest sufficiently in the health and education of each child. By satisfying the unmet need for family planning in the least developed countries, women would have fewer children and both families and the public sector would be able to invest more per child, thereby making more rapid strides in improving child health and education.

10. The Population Division, in collaboration with the United Nations Population Fund (UNFPA), is responsible for reporting on three indicators of universal access to reproductive health that are part of the revised framework for tracking progress towards the achievement of the Millennium Development Goals, namely, contraceptive prevalence (indicator 5.3), the adolescent birth rate (indicator 5.4) and the unmet need for family planning (indicator 5.6). In 2010, the Division produced updated estimates at the global, regional and subregional levels for each of those indicators and provided them, together with the corresponding metadata on definitions and methods of computation, to the Millennium Development Goal database maintained by the Statistics Division of the Department of Economic and

[3] United Nations publication, Sales No. E.10.XIII.8.

Social Affairs. The Population Division also contributed estimates of the contraceptive prevalence of modern methods and condom use, and of the spacing and limiting components of unmet need for family planning to the Millennium Development Goal database. Data on these indicators are also available on the Population Division's website.

III. Health and mortality

11. In the area of health and mortality, the Population Division has continued to compile data for the estimation of mortality together with relevant metadata. An inventory of data sources useful for the analysis of mortality levels and trends was published in the CD-ROM edition of the *World Mortality Report 2009*.[4] The CD-ROM contains estimates of several mortality indicators for 196 countries or areas, referring to every five-year period between 1950 and 2010. The estimates were derived from the results of *World Population Prospects: The 2008 Revision*. The *World Mortality Report 2009* itself is under preparation.

12. The Population Division published the wallchart *Population and HIV/AIDS 2010*.[5] The wallchart provides, for all countries with data available, information on the number of adults and children living with HIV, the number of AIDS deaths, the number of AIDS orphans as well as the impact of AIDS on life expectancy and on the projected population in 2015. The wallchart also includes information on Government measures taken in response to the HIV/AIDS epidemic, including the use of blood screening; information, education and communication activities to promote prevention; provision of antiretroviral therapy (ART); adoption of legislation prohibiting discrimination against people living with HIV; and programmes for the distribution of condoms. Lastly, data on condom use, the number of people receiving ART and the percentage of HIV-positive pregnant women receiving antiretroviral treatment to prevent mother-to-child transmission of HIV are also included in the wallchart. According to the wallchart, in 2008 33.4 million people were living with HIV. The search for effective strategies to halt the spread of the HIV/AIDS epidemic remains at the top of the international agenda. In countries highly affected by the epidemic, all population and development indicators have been adversely affected by it. The data show that most countries have implemented measures to prevent the transmission of HIV as well as programmes to provide care, support and treatment to persons living with HIV.

13. The Population Division has updated its estimates of infant mortality ($_1q_0$), child mortality ($_4q_1$) and under-five mortality ($_5q_0$) by sex. The analysis of the estimates obtained will be published in a report entitled *Sex Differentials in Childhood Mortality*. The increasing availability of data on infant, child and under-five mortality by sex spanning a good part of the period 1970-2010 has permitted the derivation of at least two estimates for each of 149 countries or areas out of the 154 having at least a million inhabitants in 2009. The estimates indicate that, in almost all countries with excess female child mortality in the 1970s, such an excess disappeared over time and was no longer evident in the most recent period.

[4] POP/DB/MORT/2009.

[5] United Nations publication, Sales No. E.10.XIII.9.

14. In order to raise awareness about the timing of mortality and excess male mortality over the lifespan, the Population Division published two issues of *Population Facts*: "The age distribution of deaths" (No. 2010/3) and "Sex differentials in mortality" (No. 2010/4). The first discusses differences in the age distribution of deaths in the major development groups in relation to the causes of death underlying them. The second shows that in most countries, male mortality is higher than female mortality at all ages and, in Eastern Europe and in Latin America, male mortality is especially high relative to that of females.

15. During 2010, the Population Division contributed to the work of the Inter-agency Group for Child Mortality Estimation, whose task is to monitor progress made towards the achievement of Millennium Development Goal 4, namely, a reduction of infant and child mortality by two thirds between 1990 and 2015. The Inter-agency Group, led by the United Nations Children's Fund (UNICEF) and the World Health Organization (WHO), has as additional members the Population Division and the World Bank. The Division provides input for updating the database on infant and under-five mortality estimates maintained by UNICEF, and in 2010 it assisted in preparing *Levels and Trends in Child Mortality, Report 2010*.[6]

16. The Population Division provided input to the Thematic Papers on Millennium Development Goals 4, 5 and 6,[7] prepared under the leadership of UNICEF as background information for the High-level Plenary Meeting held by the General Assembly in September 2010 to review progress made towards the achievement of the Millennium Development Goals.

17. The Population Division co-chaired the Working Group on Millennium Development Goals of the Department of Economic and Social Affairs, which was in charge of organizing intradepartmental activities in preparation of the High-level Plenary Meeting of September 2010 and of providing substantive support for the Meeting itself. The Population Division provided substantive support for the Round Table on Health and Education taking place during the High-level Plenary Meeting.

IV. International migration

18. The Population Division prepared the report of the Secretary-General on international migration and development for the sixty-fifth session of the General Assembly (A/65/203). According to the report, in 2010 there were 214 million international migrants in the world, 60 per cent of whom lived in developed countries. Because of the financial and economic crises, increases in the number of international migrants fell from 13 million in 2000-2005 to 11 million in 2005-2010. While unemployment in host countries has risen among both natives and international migrants, migrant workers have been more affected because they are concentrated in the sectors that have borne the brunt of the economic downturn. Owing to the crisis, remittances to low- and middle-income countries fell from $336 billion in 2008 to an estimated $316 billion in 2009, the first decline in more than a decade. These consequences of the economic crisis make it all the more urgent to safeguard the rights of migrants. As of June 2010, 82 Member States had ratified at least one of the three key international instruments relative to the rights of

[6] www.childinfo.org/files/Child_Mortality_Report_2010.pdf.

[7] www.undg.org/docs/11421/MDG4-6_1954-UNDG-MDG456-LR.pdf.

migrant workers. In recent years, multilateral assistance for projects on international migration and development have increased markedly, reaching nearly $250 million in 2010. The report noted that, out of the 114 recommendations produced by the state-led Global Forum on Migration and Development (GFMD) since 2007, 102 had been followed up by at least one member of the Global Migration Group (GMG), which includes 14 United Nations entities, the World Bank and the International Organization for Migration (IOM).

19. To highlight the impact of migration on the health-care workforce of developing countries, the Population Division prepared an issue of *Population Facts* (No. 2010/2/E/Rev) entitled "Health workers, international migration and development", which documents the shortage of health workers in developing countries and its negative impact on the efforts to achieve the health-related Millennium Development Goals, particularly in sub-Saharan Africa. According to this publication, 18 per cent of doctors and 11 per cent of nurses employed in member countries of the Organization for Economic Cooperation and Development (OECD) are foreign-born, and 74 per cent of foreign-born doctors and 65 per cent of foreign-born nurses living in OECD countries were born in non-OECD countries. To avoid depleting further the health-care workforce of countries with shortages of health workers, several receiving countries have been establishing codes of practice for ethical recruitment. Furthermore, in May 2010, the World Health Assembly adopted a global code of practice to promote ethical recruitment of health workers, develop health workforces and establish sustainable health systems.

20. Another issue of *Population Facts* focused on "International migrants by age" (No. 2010/6). Based on newly available estimates of the number of international migrants classified by age group and sex, this issue shows that 72 per cent of the 214 million international migrants in 2010 were aged 20 to 64, the main working ages. The median age of international migrants in developed countries was 43 years compared to just 34 years in developing countries. Only 15 per cent of international migrants were under age 20 compared to 36 per cent of the total population. Migrant children and adolescents were more likely to live in developing countries than in developed countries (60 per cent lived in developing countries), whereas older migrants aged 65 years or over were more likely to live in developed countries than in developing countries (62 per cent lived in developed countries). Among the 27 million international migrants aged 65 or over, 57 per cent were women.

21. The Population Division prepared the report of the Eighth Coordination Meeting on International Migration, which was held in New York on 16 and 17 November 2009. Both the papers presented as background for the meeting and the presentations made at the meeting can be accessed on the Population Division's website.[8]

22. With the support of UNICEF and the Special Unit for South-South Cooperation of the United Nations Development Programme (UNDP), the Population Division continued to update the United Nations Global Migration Database, a web-based database that contains the most complete set of statistics on the number of international migrants enumerated in each country and classified by country of birth or country of citizenship, sex and age.[8] The Population Division assisted UNICEF in the preparation of a poster, a map and a fact sheet on migrant

[8] www.unmigration.org.

children, which were distributed at the 2010 meeting of the Global Forum on Migration and Development, held in Puerto Vallarta, Mexico, from 8 to 11 November 2010.

23. The Population Division collaborated in various activities organized by the Global Migration Group. The Division prepared the background paper entitled "Data and analysis: Partnering to better understand and address the human development implications of migration" for the GMG Practitioners Symposium on Overcoming Barriers: Building Partnerships for Migration and Human Development, held in Geneva, Switzerland, on 27 and 28 May 2010. The Population Division supported the Office of the Under-Secretary-General for Economic and Social Affairs in its participation in the GMG meeting of principals, which was held in Geneva on 30 September 2010. The Division also contributed to the GMG Expert Meeting on Migrants in an Irregular Situation: Ensuring the Effective Promotion and Protection of Their Human Rights, which was held in Geneva on 22 October 2010. Lastly, the Population Division provided inputs to the GMG publication entitled *Mainstreaming Migration into Development Planning: A Handbook for Policy-makers and Practitioners*.[9]

24. The Population Division continued to participate in the Ad hoc Working Group on Policy Coherence, Data and Research of the Global Forum on Migration and Development and contributed to various other forums that promote global and regional dialogue and cooperation on international migration and development.

25. The Population Division also continued to provide support to the Special Representative of the Secretary-General on International Migration and Development, who is the main link between the Global Forum on Migration and Development and the United Nations. This work was supported through a grant provided by the John D. and Catherine T. MacArthur Foundation.

V. World population projections

26. The preparation of the official United Nations population estimates and projections for all countries and areas of the world is a key part of the work of the Population Division. The results of this activity are used throughout the United Nations system by all entities requiring population data. In addition, the official United Nations population estimates and projections are distributed as part of widely used databases accessible over the Internet, including: the World Development Indicators database maintained by the World Bank; the data portal of the United Nations, UNDATA, maintained by the Statistics Division of the Department of Economic and Social Affairs, and FAOSTAT, the statistics database maintained by the Food and Agriculture Organization of the United Nations. The Population Division also makes the data available through its website.

27. In 2010, the Population Division issued the results of the *2009 Revision* of *World Urbanization Prospects*. Outputs presenting the results of the *2009 Revision* include an interactive online database accessible through the Division's website, a CD-ROM,[10] two wallcharts[11] and a working paper presenting the highlights[12] of the

[9] http://publications.iom.int/bookstore/index.php?main_page=product_info&cPath=1&products_id=661.

[10] *World Urbanization Prospects: The 2009 Revision*, CD-ROM (POP/DB/WUP/Rev.2009).

2009 Revision. In preparing the *2009 Revision*, particular attention was given to the production of detailed documentation on the data sources and definitions used at the country level, as well as for cities and urban agglomerations. The full metadata compiled in this regard are accessible on the Population Division's website.[13] The site also includes useful figures and maps illustrating the results obtained.

28. The *2009 Revision* of *World Urbanization Prospects* confirmed that more than half of the world population lived in urban areas in 2010. Nevertheless, Africa and Asia remain mostly rural, with six out of every 10 persons living in rural areas. Between 2009 and 2050, the world population is expected to increase by 2.3 billion, passing from 6.8 billion to 9.1 billion. At the same time, the population living in urban areas is projected to gain 2.9 billion, passing from 3.4 billion in 2009 to 6.3 billion in 2050. Thus, the urban areas of the world are expected to absorb all the population growth expected over the next four decades, while at the same time drawing in some of the rural population through both migration and the reclassification of rural settlements as cities. As a result, the world rural population is projected to start decreasing in about a decade and there will likely be 0.5 billion fewer rural inhabitants in 2050 than today.

29. Furthermore, most of the population growth expected in urban areas will be concentrated in the cities and towns of the less developed regions. Asia, in particular, is projected to see its urban population increase by 1.7 billion, Africa by 0.8 billion, and Latin America and the Caribbean by 0.2 billion. Population growth is therefore becoming largely an urban phenomenon concentrated in the developing world. Realization of these projections is contingent on the continuation of fertility reductions in the developing world. If fertility were to remain constant at current levels and the pace of urbanization remained that projected in the *2009 Revision*, the world urban population would increase to 7.6 billion by 2050 instead of the 6.3 billion expected when fertility is assumed to continue declining in all developing regions. In many countries, natural increase (the difference of births minus deaths) accounts for 60 per cent or more of urban population growth. Consequently, policies that facilitate the reduction of fertility by ensuring that couples have access to modern contraception and that they can decide freely the number of children they desire can contribute to moderate increases in the number of urban dwellers, thereby making it easier for developing countries to adjust to the transformations associated with growing urbanization.

30. In order to respond to requests for long-term population projections used for modelling future climate and energy use, the Population Division prepared a new set of long-term projections to 2300 consistent with the *2008 Revision* of *World Population Prospects*. The results of the long-term projections are presented on a CD-ROM.[14] They include six different scenarios illustrating the effects on population growth and structure of different hypotheses on the future course of fertility. In the medium scenario, the world population peaks at 9.4 billion in 2070 and then declines because the fertility of all countries is assumed to reach below-

[11] *Urban and Rural Areas 2009* (United Nations publication, Sales No. E.10.XIII.6) and *Urban Agglomerations 2009* (United Nations publication, Sales No. E.10.XIII.7).

[12] *World Urbanization Prospects: The 2009 Revision — Highlights* (ESA/P/WP/215).

[13] http://esa.un.org/unpd/wup/index.htm.

[14] United Nations, *World Population Prospects: The 2008 Revision, Long Range Projections Supplement* (POP/DB/WPP/LRPS/Rev.2008), 2010.

replacement level and remain at that level for a century. A scenario that maintains all countries at replacement level produces a population that continues to grow, albeit increasingly slowly, until 2300, when it reaches 11.5 billion. A scenario that maintains fertility and mortality constant in every country at today's levels shows that current levels are unsustainable because they yield a world population of 3.5 trillion in 2300, and even the scenario that maintains fertility just a quarter of a child higher than in the medium scenario produces a population of 30 billion in 2300, indicating that, over the long run, fertility in every country needs to remain very close to replacement level to avoid an excessive increase of the world population.

31. During 2010, the Population Division worked on the preparation of the *2010 Revision* of *World Population Prospects*, which is expected to be released in the first quarter of 2011. Estimates and projections for 230 countries and areas and more than 60 regions are being produced. The *2010 Revision* will extend the projection period to 2100 and its projected fertility will be based on a Bayesian Hierarchical Model (BHM) that uses past trends in fertility in all countries and the past experience of each country to generate future paths of fertility change.[15]

32. The Division participated in the sixteenth session of the Committee for the Coordination of Statistical Activities (CCSA), which was held in Vienna from 1 to 3 September 2010. The Division also continued collaborative work with the University of Washington and the University of Singapore on improving the methodology for the preparation of probabilistic population projections based on a Bayesian approach. Lastly, work continued on the development of a database containing all available statistics relevant for the preparation of national population estimates and projections.

VI. Population policies

33. In 2010, the Population Division issued *World Population Policies 2009*,[16] the most comprehensive overview of population policies for all Member and non-member States of the United Nations. The report documents the evolution of population policies by providing policy information referring to 1976, 1986, 1996 and 2009. The report covers information on policies related to population growth, fertility, health and mortality, international migration and spatial distribution. It confirms that the HIV/AIDS epidemic continues to be the major population-related concern among Governments. In developing countries, high mortality in childhood and high maternal mortality are, respectively, the second and third most commonly reported concerns. In developed countries, population ageing is the most commonly reported concern, followed by the HIV/AIDS epidemic, low fertility and the potential shortage of workers that could result from continued low fertility and its consequences. Developing countries are also concerned about the number of persons of working age, but mainly because they have been unable to expand employment rapidly enough. To complement the printed report, the policy information contained in *World Population Policies 2009* is released on a CD-ROM and via an interactive database that is accessible on the Population Division's website.

[15] Leontine Alkema and others, "Probabilistic projections of the total fertility rate for all countries", *Demography*, forthcoming.

[16] United Nations publication, Sales No. E.09.XIII.14.

34. During 2010, the Division began work on a wallchart entitled *World Abortion Policies 2011* that will include the most recent information on abortion policies for all countries in the world, including the grounds on which induced abortion is permitted, estimates of the abortion rate and levels of contraceptive use.

35. As part of its work to monitor the implementation of the Programme of Action of the International Conference on Population and Development and other internationally agreed development goals related to population, the Population Division launched in 2008 the Tenth United Nations Inquiry among Governments on Population and Development. Between 1963 and 2003, nine inquiries among Governments were conducted. Each records Government views and policies on every aspect of population and development. The Tenth Inquiry was distributed among all permanent representatives to the United Nations in New York and was made available in printed form, electronically and via the Internet. As of November 2010, only 23 per cent of all Member States had responded to the Inquiry despite efforts to obtain responses. The results of the Inquiry have been incorporated into the report on *World Population Policies 2009*.

36. While the Division has accumulated a wealth of information on a wide range of population policies, the electronic storage and organization of those resources has been limited, thus restricting the use of the information. In order to improve access to those resources, the Population Division began work in 2009 on the development of a database to organize and store the information available with a view to making it more easily accessible and amenable to analysis. A web-based user interface is being developed to facilitate use of the database.

VII. Population and development

37. In 2010, the Population Division published the report entitled *World Population Ageing 2009*,[17] following the release at the end of 2009 of its electronic version, available on the Population Division's website. The report on *World Population Ageing 2009* is accompanied by a CD-ROM that contains a comprehensive set of indicators on ageing by development group, major area, region and country or area. The report provides detailed demographic information and analysis of socio-demographic trends on population ageing. It is intended to serve as a basis for follow-up activities to the Second World Assembly on Ageing and, in particular, to those related to the second review and appraisal of the Madrid International Plan of Action on Ageing, 2002. The report shows that, globally, persons aged 60 or over numbered 737 million in 2009 and are projected nearly to triple by 2050, to reach 2 billion. In all countries, both the absolute and the relative number of older persons will increase over the coming decades. Women constitute more than half of the older population. Older persons are increasingly concentrated in the less developed countries, which accounted for 64 per cent of the population aged 60 or over in 2009 and will likely account for nearly 80 per cent in 2050. The recent financial and economic crises have had a severe negative effect on the older population. In 2008, many pension funds had negative rates of return. Furthermore, because millions of older persons lack pensions, especially in developing countries, they are particularly vulnerable to economic downturns.

[17] United Nations publication, Sales No. E.10.XIII.5.

38. The Population Division continued its collaboration with the Economic Commission for Latin America and the Caribbean (ECLAC) and the International Development Research Centre of Canada (IDRC) on the Project on National Transfer Accounts, which promotes the production and analysis of internationally comparable information on population ageing and intergenerational transfers. The Division participated in the panel on "Sharing Across Generations: The Challenges of Population Aging and Development", organized by IDRC in Ottawa, on 2 June 2010. The Panel provided an opportunity to showcase the Division's work in this area.

39. As part of its collaboration with UNFPA, the Population Division participated in a Technical Meeting on Low Fertility, Ageing and Population Decline, organized by UNFPA in New York on 23 November 2010. The meeting focused on the social and economic consequences of low fertility, ageing and population decline and their implications for development. The Division also participated in the Expert Meeting on Collecting Data to Monitor Progress towards the Implementation of the Madrid International Plan of Action on Ageing, held in New York on 9 and 10 December 2010. The meeting reviewed the strengths and limitations of various sources of data on older populations and discussed methodology to collect and analyse data related to population ageing. The meeting reviewed the indicators developed by the United Nations Programme on Ageing and discussed areas of inter-agency collaboration to improve the availability of data and indicators relevant for the monitoring of the implementation of the International Plan of Action on Ageing.

VIII. Monitoring, coordination and dissemination of population information

A. Monitoring of population trends and policies

40. The report of the Secretary-General on the annual theme of the session of the Commission on Population and Development is prepared by the Population Division. The 2010 report (E/CN.9/2010/3) was devoted to the theme of "Health, morbidity, mortality and development". It has been published as the *World Population Monitoring: Focusing on Health, Morbidity, Mortality and Development: The Concise Report*,[18] which also includes resolution 2010/1 on health, morbidity, mortality and development adopted by the Commission on Population and Development at its forty-third session (E/2010/25, chap. I, sect. B), in order to promote its wider dissemination.

41. In 2010 the Division initiated work on two reports of the Secretary-General to be presented to the Commission at its forty-fourth session: the report on "Fertility, reproductive health and development" (E/CN.9/2011/3) and the biennial report on "World demographic trends" (E/CN.9/2011/6).

[18] United Nations publication, Sales No. E.10.XIII.10.

B. Dissemination of population information and data

42. During 2010, the Population Division continued to update and expand its website[19] in order to provide Government officials and civil society with access to timely population information. The Population Division's website contains most of the publications issued by the Division, which are often posted well in advance of their availability in printed form. In addition, the website contains items that are available only via the Internet, including highlights, key findings, papers presented at meetings and interactive databases. The site also contains a full collection of the documents and statements considered by the Commission on Population and Development at its different sessions. Traffic statistics indicate that in 2010 the Division's website was visited by about 2,100 users per day, generating approximately 750,000 page views for the year.

43. The Population Division also maintains a website focusing exclusively on international migration.[20] This website serves as a portal containing links to the numerous international migration activities closely related to the work of the Population Division, both within and outside the United Nations system. In particular, it includes links and references to the activities of the Global Forum on Migration and Development and of the Global Migration Group.

44. The Population Division is responsible for maintaining the website of the United Nations Population Information Network (POPIN), although extrabudgetary funding for the project ceased several years ago. The Network is a portal to the population information and data available throughout the United Nations system. Analysis of traffic to the website shows that the Network remains a well-established brand name and is a useful channel for the dissemination of the population information generated by the United Nations system, with the number of visits having totalled over 150,000 in 2010.

45. The Population Division continued to use its e-mail announcement service to alert subscribers to important news, events and developments concerning the Division's activities. The service has currently over 2,000 subscribers from all over the world. In addition, information on the Division's activities as well as publications of particular relevance to developing countries are distributed regularly to persons and institutions included in different mailing lists.

46. MORTPAK for Windows, the United Nations software package for demographic measurement, developed by the Population Division, continues to be distributed among analysts, including those in developing countries who use it for teaching or research purposes.

IX. Technical cooperation

47. The focus of the Population Division's regular programme of technical cooperation is on building and strengthening capacity in developing countries to analyse the demographic information needed to guide the formulation and implementation of population policy.

[19] www.unpopulation.org.

[20] www.unmigration.org.

48. As previously reported, in 2009 the Population Division conducted an inquiry to assess national institutional capacity to produce population estimates and projections among national statistical offices. The results of the inquiry indicate that national statistical offices in developing countries are not yet universally able to produce reliable demographic indicators or detailed population projections, mainly because many of them have very few professional staff with specialized training in demography. Deficits in trained personnel also affect several countries with economies in transition and reduce their capacity to produce timely population estimates and projections. The Inquiry also showed that virtually all national statistical offices are interested in participating in capacity-building activities, either to acquire skills that cannot be acquired locally or to upgrade skills by learning about new methodologies. Interest in such activities is high in both developed and developing countries. A report on the Inquiry[21] is available on the Population Division's website.

49. In order to assist national statistical offices in developing the capacity to produce reliable demographic estimates, the Population Division provided technical assistance in a regional workshop on monitoring the health-related Millennium Development Goals, organized by the United Nations Statistics Division and the Economic Commission for Europe (ECE), and held in Geneva from 8 to 11 November 2010. The workshop brought together 13 representatives of national statistical offices from States members of ECE as well as representatives of international organizations. Workshop participants noted the limitations that national statistical systems faced to improve reporting of Millennium Development Goal indicators of maternal and child health. Particular attention was given to discussing the possible sources of discrepancies between national estimates and those used by international organizations. The Population Division made presentations and led discussions on measuring contraceptive prevalence, the adolescent birth rate and unmet need for family planning. The structure and content of an ECE database for Millennium Development Goal monitoring was also a focus of discussion.

50. During 2010, the Population Division collaborated with ECE in organizing two regional workshops aimed at strengthening national capacities to improve international migration data. The first workshop,[22] held in Bishkek, Kyrgyzstan, from 15 to 17 February 2010, brought together more than 30 representatives of national statistical offices and relevant ministries from current and former member countries of the Commonwealth of Independent States (CIS) as well as representatives of international organizations. The main objective of the workshop was to identify gaps in the availability of data on international migrants and to identify practical ways to close them before the General Assembly of the United Nations holds its second High-level Dialogue on International Migration and Development in 2013. The workshop identified key migration trends and policies at the regional level, reviewed international standards and recommendations for collecting migration statistics, discussed tools for follow-up activities, and identified needs for capacity development. The second regional workshop was held in Istanbul, Turkey, from 6 to 8 December 2010. It reviewed new initiatives to improve international migration data in the region and discussed ways of building synergies

[21] Report on the Inquiry on National Institutional Capacity to Produce Population Estimates and Projections. Technical Paper No. 2010/1. Available from www.un.org/esa/population/publications/technicalpapers/TP2010-1.pdf.

[22] www.unece.org/stats/documents/2010.02.migration.htm.

among the various initiatives. The workshop also discussed a draft of a practical guide to collect and use migration data in the CIS region. Both workshops were part of the activities programmed under the project entitled "Strengthening national capacities to deal with international migration: Maximizing development benefits and minimizing negative impact", funded by the United Nations Development Account.

51. Lastly, the Population Division has continued its collaboration with the French National Committee of the International Union for the Scientific Study of Population in developing and implementing Demopaedia, an interactive web-based Wiki platform providing access to a set of multilingual demographic dictionaries available in 14 languages to population specialists, government officials, non-governmental organizations and the media.

Annex

Publications, expert group meetings and other materials prepared or organized by the Population Division (1 January-31 December 2010)*

Expert group meetings

Expert Panel on Fertility, Reproductive Health and Development, New York, 7 December 2010.

Research studies

World Population Ageing 2009 (United Nations publication, Sales No. E.10.XIII.5).

World Fertility Report 2007 (United Nations publication, Sales No. E.10.XIII.8).

World Population Monitoring: Focusing on Health, Morbidity, Mortality and Development: The Concise Report (United Nations publication, Sales No. E.10.XIII.10).

World Population Policies 2009 (United Nations publication, Sales No. E.09.XIII.14).

Guidelines for Improving Data on Child Adoption (United Nations publication, Sales No. E.10.XIII.11).

Report on the Inquiry on National Institutional Capacity to Produce Population Estimates and Projections (Technical Paper No. 2010/1).

Databases

Population, Resources, Environment and Development (PRED) 2009, version 5.0 (POP/DB/PD/PRED/2009).

World Mortality Report 2009. Datasets in Excel and pdf formats (POP/DB/MORT/2009).

World Urbanization Prospects: The 2009 Revision (http://esa.un.org/unpd/wup/index.htm).

2010 Update for the MDG Database: Contraceptive Prevalence (POP/DB/CP/A/MDG2010).

2010 Update for the MDG Database: Unmet Need for Family Planning (POP/DB/CP/B/MDG2010).

2010 Update for the MDG Database: Adolescent Birth Rate (POP/DB/Fert/A/MDG2010).

Wallcharts

Urban and Rural Areas 2009 (United Nations publication, Sales No. E.10.XIII.6).

Urban Agglomerations 2009 (United Nations publication, Sales No. E.10.XIII.7).

Population and HIV/AIDS 2010 (United Nations publication, Sales No. E.10.XIII.9).

World Fertility Patterns 2009 (United Nations publication, Sales No. E.10.XIII.12).

* Excluding reports issued as parliamentary documents.

Policy briefs

"Speeding progress on the Millennium Development Goals", *Population Facts*, No. 2010/1.

"Health workers, international migration and development", *Population Facts*, No. 2010/2/E/Rev.

"The age distribution of deaths", *Population Facts*, No. 2010/3.

"Sex differentials in mortality", *Population Facts*, No. 2010/4.

"Accelerating achievement of the MDGs by lowering fertility: Overcoming the challenges of high population growth in the least developed countries", *Population Facts*, No. 2010/5.

"International migrants by age", *Population Facts*, No. 2010/6.